Index to Contents, May, 1942

(The Annual Index to Contents appears at the back of the December issue each year)

Wartime Activities of Cities

Our Freedoms and Rights . . . 5
Trolley Back in Favor in War Traffic . . . 7
Beating the Infra-Red Camera . . . 7
Fire Equipment for City Defense . . . 15
The City and the USO . . . 39
Chemical Poisoning of Water Supplies . . . 46
For Quick Action in Case of Bombing . . . 51
Street Car Rails Come Out at a Profit . . . 54
State, City Expenditures in Wartime . . . 56
How a Small Town Can Help Win the War . . . 58
Dynamic Exhibition of Wartime Housing . . . 59
OCD Streamlined for War . . . 60
A Letter from OCD to The American City . . . 60
Navy Building and City Planning . . . 68
Relation of Civilian Defense Councils to City Governments . . . 68
Municipalities Adopt Wartime Ordinances . . . 69
Committee Organization for Wartime . . . 73
A Revitalized Chamber of Commerce . . . 73
Before and Since Pearl Harbor . . . 75
Handling War Traffic . . . 81
Street Lighting Aids Production . . . 91
Protective Lighting Bracket . . . 91
Photoelectric Blackout Control . . . 91
New Blackout Street Light . . . 91
Blackout Light for Municipal Vehicles . . . 91
Planning Water Supply, Sewerage, and Other Facilities with War Housing . . . 93
Rubber Conservation in Commuting Community . . . 95
When Soldiers or Workers Come to Town . . . 97
Foundations for Peace in Time of War . . . 97
Getting Japan to Sue for Peace . . . 111
Protection for Centrifugal Pumps . . . 113
Production for Victory . . . 115

Airports and Aviation
Urban Land Use and the New Mobility . . . 44

Business Machines and Equipment
Machine Tax Accounting Saves Money, Time, Staff . . . 57
Punched Cards Make and Prove Boston's Daily Tax Report . . . 66

Census
Cities Can Have Special Census Taken . . . 95

City Manager Plan
City Manager Appointments . . . 93

Civic-Commercial Organizations
Schools for Chamber Executives . . . 56
Committee Organization for Wartime . . . 73
A Revitalized Chamber of Commerce . . . 73
Before and Since Pearl Harbor . . . 75
Inter-Chamber Fire Waste Contest Awards . . . 97

Conventions
Conventions—When and Where . . . 103

Finance and Taxation
Waiving Penalties on Delinquent Taxes . . . 47
State, City Expenditures in Wartime . . . 56
The Tax-Delinquent Land Problem . . . 77
Financing Expanded Municipal Activities . . . 77
Municipal Bond Market . . . 93

Fire Prevention and Control
Fire Equipment for City Defense . . . 15
Neighborhood Civilian Fire Departments . . . 55
Inter-Chamber Fire Waste Contest Awards . . . 97

Garages, Municipal
Municipal Garage Data from Greensboro . . . 11

Government and Administration
Cities Adopt Wartime Ordinances . . . 69
Need for Lab Tests . . . 111

Handbill Distribution
Commercial Handbill Prohibition . . . 101

Health and Sanitation
Winning National Health Contest . . . 67

Housing
MIT Courses in Planning . . . 56
Dynamic Exhibition of Wartime Housing . . . 59
Plight—Blight—Flight . . . 65
Planning Water Supply, Sewerage, and Other Facilities with War Housing . . . 93
Home Ownership in the United States . . . 97

Legal Decisions
Zoning and Planning Notes . . . 99
Municipal Law Notes and Decisions . . . 101

Lighting, Outdoor
Light the Playing Fields . . . 87
Footcandles for Recreation . . . 87
Floodlighting for Sports and Recreation . . . 89
Street Lighting Aids Production . . . 91
Protective Lighting Bracket . . . 91
Photoelectric Blackout Control . . . 91
New Blackout Street Light . . . 91
Blackout Light for Municipal Vehicles . . . 91

Motor Equipment
Truck Maintenance for the Duration . . . 113

News and Illustrations
Hints for Officials . . . 109

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IN THE MUNICIPAL INDEX AND ATLAS (the annual reference volume of data and condensed catalogs published by the American City Magazine Corporation) readers will find statistical material, and articles on a wide variety of municipal and public works subjects, not published in the monthly issues of the magazine.

Paints
Paints for City Uses . . . 7
Beating the Infra-Red Camera . . . 7

Parking Meters
Parking Meters Up to Now . . . 85

Parks and Recreation
The City and the USO . . . 39
Footcandles for Recreation . . . 87
Floodlighting for Sports and Recreation . . . 89
When Soldiers or Workers Come to Town . . . 97

Planning and Zoning
Our Freedoms and Rights . . . 5
It Is Not Enough to Make Plans . . . 43
Urban Land Use and the New Mobility . . . 44
Determined Not to Become a Ghost Town . . . 48
MIT Courses in Planning . . . 56
Plight—Blight—Flight . . . 65
Navy Building and City Planning . . . 68
City Planning Agencies Surveyed . . . 75
The Tax-Delinquent Land Problem . . . 77
Developing Interest in City Planning . . . 79
Traffic Activity in Steel Center . . . 83
Planning Water Supply, Sewerage, and Other Facilities with War Housing . . . 93
Local Officials Aid Cooperative Planning . . . 97
Zoning and Planning Notes . . . 99
Central Planning Authority for England and Wales . . . 99

Police
Police Radio Binds Cities . . . 15

Publications
New Books and Pamphlets . . . 104

Public Relations
It Is Not Enough to Make Plans . . . 43
The ICMA Reviews the Record . . . 53
Developing Interest in City Planning . . . 79

Public Utilities
Why Should a Municipality Own Its Electric Utility? . . . 41
The "Flow Line" Makes Its Debut . . . 117

Sewers and Sewage Disposal
Sewer-Service Charges a City Policy . . . 13
Seven Cities Plan Sewage Facilities . . . 13
The Operator's Standpoint on Sewage-Plant Design . . . 63
New Handbook on Clay Sewer Pipe . . . 117

Street Cleaning
Cleaning the Streets of Jackson, Miss. . . . 11

Street, Sidewalk Construction and Maintenance
Sidewalk Maintenance on Organized Basis . . . 50
Street Car Rails Come Out at a Profit . . . 54
Building a Resort Community . . . 109
City Clings to Wooden Walks . . . 117

Traffic Control and Facilitation
Big City Traffic Is Largely Local . . . 11
Save Our Men . . . 15
Handling War Traffic . . . 81
Traffic Activity in Steel Center . . . 83
Traffic Control in a Private City . . . 85
Continuity of Traffic Signal Service . . . 85
Pedestrian Walk . . . 85
Traffic-Lane Marker Has Many Other Uses . . . 115

Transportation
Trolley Back in Favor in Wartime . . . 7
Tireless Street-Car . . . 7
Cleveland Buys Its Transit System . . . 83

Waste Collection and Disposal
The Battling Garbage Scow . . . 13
Service Charges for Refuse Collections . . . 13

Water Supply and Purification
Cost of Ozone Process . . . 9
Water Supply Assured at New Haven, Conn. . . . 9
Study of Water Works Trends . . . 9
Water Softening at Kansas City . . . 9
Chemical Poisoning of Water Supplies . . . 46
Strengthening a Water Supply in Nebraska . . . 51
An Impounding Reservoir Supplants Artesian Wells . . . 61
Protection for Centrifugal Pumps . . . 113
Installing a Service Without Trenching . . . 113

See pp. 16, 17, 18, 104, 105, 107 for catalogs and publications on municipal and civic subjects

For Index to Advertisements see page 120

REDERICK DITCHFIELD
8 YEARS - BROOKLYN

WILLIAM GIROUD
54 YEARS - BROOKLYN

H. C. CHRISMAN
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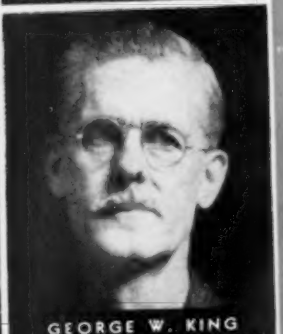

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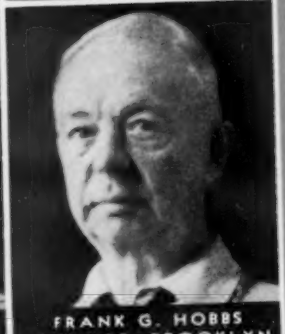

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709 YEARS OF EXPERIENCE

These

PITTSBURGH NATIONAL CRAFTSMEN HAVE EACH DEVOTED FROM 40 TO 58 YEARS TO BUILDING QUALITY WATER METERS.

There is no substitute for experience. The knack of knowing how comes easily to those who, for many years, have devoted their abilities and talents to the task at hand.

The Pittsburgh-National organization is proud of the many old-timers who have contributed so much to the successful growth of the company. These men take personal pride in their work, and build more than machine precision into our products. Working beside these veteran meter makers, a younger group of craftsmen is carrying on the tradition of keeping the quality of Pittsburgh-National Meters above any specification demands.

—o—

PITTSBURGH EQUITABLE METER COMPANY
NEW YORK · BROOKLYN · DES MOINES · MEMPHIS · OAKLAND · TULSA · CHICAGO · BOSTON

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NATIONAL METER DIVISION, Brooklyn, N. Y.

KANSAS CITY · PHILADELPHIA · SAN FRANCISCO · LOS ANGELES

Pittsburgh-National Meters

Our Freedoms and Rights

WE LOOK FORWARD TO SECURING, through planning and cooperative action, a greater freedom for the American people. Great changes have come in our century with the industrial revolution, the rapid settlement of the continent, the development of technology, the acceleration of transportation and communication, the growth of modern capitalism, and the rise of the national state with its economic programs. Too few corresponding adjustments have been made in our provisions for human freedom. In spite of all these changes, that great manifesto, the Bill of Rights, has stood unshaken a hundred and fifty years. And now to the old freedoms we must add new freedoms and restate our objectives in modern terms. These are the universals of human life:

Freedom of Speech and Expression, Freedom to Worship, Freedom from Want and Freedom from Fear

Any new declaration of personal rights, any translation of freedom into modern terms applicable to the people of the United States here and now must include:

1. THE RIGHT to work, usefully and creatively through the productive years;

2. THE RIGHT to fair pay, adequate to command the necessities and amenities of life in exchange for work, ideas, thrift, and other socially valuable service;

3. THE RIGHT to adequate food, clothing, shelter, and medical care;

4. THE RIGHT to security, with freedom from fear of old age, want, dependency, sickness, unemployment, and accident;

5. THE RIGHT to live in a system of free enterprise, free from compulsory labor, irresponsible private power, arbitrary public authority, and unregulated monopolies;

6. THE RIGHT to come and go, to speak or to be silent, free from the spyings of secret political police;

7. THE RIGHT to equality before the law, with equal access to justice in fact;

8. THE RIGHT to education, for work, for citizenship, and for personal growth and happiness; and

9. THE RIGHT to rest, recreation, and adventure; the opportunity to enjoy life and take part in an advancing civilization.

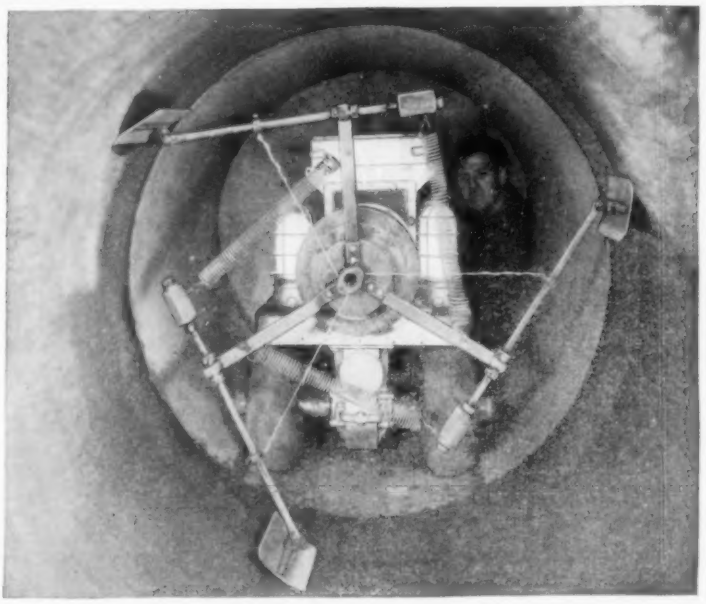
These rights and opportunities we in the United States want for ourselves and for our children now and when this war is over. They go beyond the political forms and freedoms for which our ancestors fought and which they handed on to us, because we live in a new world in which the central problems arise from new pressures of power, production, and population, which our forefathers did not face.

Their problem was freedom and the production of wealth, the building of this continent with its farms, industries, transportation, and power; ours is freedom and the distribution of abundance, so that there may be no unemployment while there are adequate resources and men ready to work and in need of food, clothing and shelter. It is to meet this new turn of events, that the new declaration of rights is demanded. But in formulating these new rights, we are not blind to the obligations which go with every right, obligations of the individual to use well his rights and to insist on the same rights for others, and obligations of the community to support and protect the institutions which make these rights actual. We believe that the American people are ready to assume these obligations and to take the private and the public action they impose.

(From "National Resources Development," report of the National Resources Planning Board transmitted to the Congress by the President on January 16, 1942.)

IS YOUR WATER SUPPLY LINE A DRAIN

ON THE CITY BUDGET?



The Centriline process is a rapid and economical method of reconditioning pipe lines. It consists of first cleaning the main and then applying, by centrifugal force, a dense cement mortar lining of required thickness, mechanically troweled to a smooth finish.

— it's time to Centriline!

Have corrosion and tuberculation invaded your pipe lines? Are they *now* wreaking their costly destruction and decreasing carrying capacity? *Then it's time to recondition!*

A protective inner lining of dense cement, applied speedily and economically the Centriline way, will restore the high efficiency of your pipe lines. Providing an ever-smooth, non-corrosive, non-tuberculating surface, this sleek new lining will permanently maintain a high coefficient and protect the underlying metal—whether steel or cast iron. Erase future depreciation costs and pumping expenditures. Centriline now and safeguard your initial investment.

Wherever your pipe line is situated, whatever its length—if its diameter is 30″ or more—our men can quickly reach and recondition it. We welcome your inquiry. Go all out for Victory—save what you have!

CENTRILINE PROCESS

CENTRILINE CORPORATION

140 CEDAR STREET • NEW YORK, N. Y.

Restores and Protects Pipe-Line Carrying Capacity

Our Municipal Notebook

CITY TRANSIT HAS $146,868 1941 SURPLUS

Report to Council Shows $63,642 Deficit Met

miles an hour, the trolley coach is expected to shoulder much of the

Trolley Coming Back in Favor As War Traffic Needs Increase

Cities Now Returning to Street Car Operations to Meet Transit Demands Resulting From Mass Withdrawal of Automobiles From Service

By Raymond L. Hoadley

The trolley car is coming back into own as communities all over the tion struggle with the problem of nsporting thousands of war work- s to and from war plants.

Salt Lake City resumed street car peration just six months after buses

000,000 passengers this year, 3,000,- 000,000 more than in 1941. In 1943 he predicts they will have to carr 20,000,000,000.

Estimates vary regarding the number of automobiles that will be coming off the road as the war pa- cresses. There probably won't b

The left-hand clipping is from a Rochester, N. Y., newspaper; the right-hand, from a New York City newspaper

Tire-less Street-Car

THE STREET-CAR IS GOING TO BE GRANTED PROBATION, in the opinion of the Federal Government, of many cities, the transit companies, and the bus manufacturers. Trolley cars don't need rubber tires.

Is this all there is to it? When the war is over and rubber floods the automotive market, will the trolley cars be replaced as rapidly as possible by buses?

The answer depends upon the transit operators and manufacturers and the city officials. Electric transit can be reinstated as the premier mode of city transportation if the transit companies regard the emergency not as a sunny day for haying, but as a period of special consideration for the multitudinous riding public and of making plans for the future of modern streetcars, trolley coaches, and buses, each where each belongs from a traffic point of view. And if, again, the electric transit manufacturers get over to the city officials and their constituents the fact that the greater necessity to use public carriers is being matched by the design and production of public-carrier vehicles of permanent worth to the city. And if, finally, the city governments come to view the emergency transit conditions as the once-in-a-lifetime occasion for solving the transit problem.

Whatever dependence may again be placed in the rubber supply of Asia, or even of nearer South America, the memory of this tire shortage will persist a long time. The tire-less virtue of the street-car will also be remembered. As a mere measure of public policy and common sense, the street-car should be retained. It should be retained, however, as the modern street-car, part of the modern transit-traffic picture. This year and next and the year after are the years in which to sell the cities and the people on the comfort and speed as well as the reliability of the street-car, while the riding public is the largest it is ever likely to be.

Paints for City Uses

THE CITIES OF THE COUNTRY are beginning to give new thought to maintenance. Always a major activity of city departments, strict maintenance has of course become an obligation.

City officials are noted for buying only what they must have. Only to a minor degree do they stock up against a possible shortage. They get along without—too much.

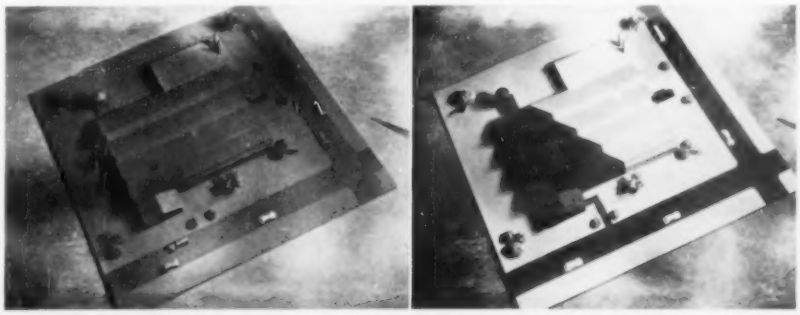
The *new thought* that is now being given to maintenance recognizes the possibility of enhancing while maintaining. Paint is a noteworthy tool for this dual improvement.

There are a number of manufacturers of numerous paints designed and site-tested for specific purposes. Here, as elsewhere, the war has stimulated further research in order to furnish promptly paints which are as effective as those depending upon the proscribed metals. Certain manufacturers have painstakingly and energetically maintained their lines without sacrificing final quality and performance. Some of these have given special consideration to municipal requirements for the protection and safeguarding of structures and public.

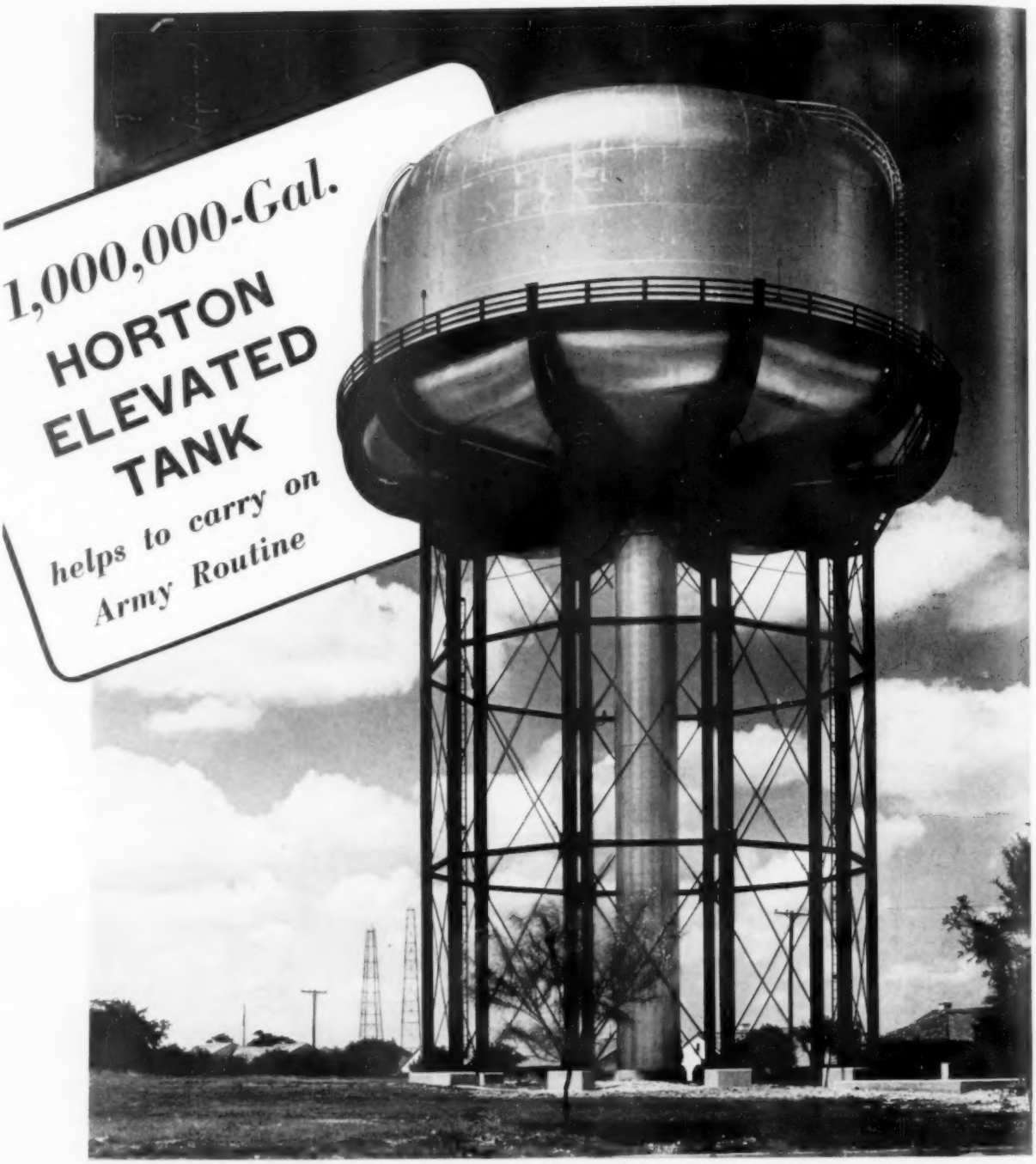
Beating the Infra-Red Camera

A BOMBER'S CREW must find the objective before they come within four miles of it in order to adjust sights and release bombs for a direct hit. Their chances of success naturally depend upon several factors, one of which is the effectiveness with which camouflage paints and textures have been designed and applied—not only to the target but to identifying landmarks around it.

Daylight concealment is both an art and a science. Color alone in camouflage paints brings no relief from accurate bombing because infra-red cameras quickly spot any surfaces or areas on which ordinary paint has been applied. They are recorded as black against the white of natural terrain. To offset this, there is now an infra-red (heat) reflecting series of paints which will defy the infra-red lens. Incidentally, these paints maintain lower inside temperatures in sun-exposed buildings and fuel tanks. Developed in the West by research chemists of the Premier Oil & Lead Works, Los Angeles, these are permanent, durable paints which differ from the usual exterior paints only in pigmentation adjustment. Each paint batch is photo-tested for infra-red reflectance, then immediately canned and sealed under close supervision.



(Left) Ordinary photograph of plan painted with ordinary paint. (Right) Infra-red photograph in which the ordinary paint appears black, whereas the new-type paint appears light



IN general, the problems of water supply and service at an Army post are quite similar to those of an average municipality. Uniform distribution pressures, provision for pumping during off-peak periods, together with an adequate reserve immediately available for fire protection—these are advantages that are mutually beneficial to both cities and training camps.

Now, with the enlarging of our armed forces, elevated tanks like the 1,000,000-gal. radial-cone bottom unit shown above are doing their part in helping to carry on Army routine by providing a dependable, efficient water supply for post and cantonment requirements.

CHICAGO BRIDGE & IRON COMPANY

BIRMINGHAM • CHICAGO • CLEVELAND • DETROIT • HAVANA • HOUSTON
NEW YORK • PHILADELPHIA • SAN FRANCISCO • TULSA • WASHINGTON

During May we hope you will remember to mention THE AMERICAN CITY.

Water-Works Operation

Whiting, Ind., Notes Cost of Ozone Process

WHITING, IND., which draws its water supply from a heavily polluted section of Lake Michigan, formerly used aeration, alum coagulation, pre-chlorination, sedimentation, filtration, and post-chlorination in its purification process.

In the summer of 1940 the ozone treatment was installed by the Ozone Processes, Inc., Philadelphia, Pa., in place of the aeration, with definite threshold odor reduction. The use of ozone so reduced the chlorine demand of the raw water that usually only enough chlorine and ammonia are needed to maintain a desirable residual. The 1940-41 cost of chemicals and ozone amounted to $5.49 per million gallons or $1.99 greater than the 1939-40 cost of the chemical treatment alone.

—From the March, 1942, Public Works Engineers' News Letter.

Water Supply Assured at New Haven, Conn.

WITH NEARLY 7,000,000,000 GALLONS OF WATER AVAILABLE in 16 reservoirs, defense industries and domestic consumers of New Haven, Conn., are assured of an adequate water supply this spring and summer.

The engineers for the New Haven Water Co. foresee no necsesity of curtailing the use of water at present, although they caution against careless waste of the supply. The total amount of water on hand is 1,330,000,000 gallons less than last year at this time, but a normal rainfall during the next three months would provide "reasonably good conditions for the summer," it is reported.

The rainfall since January 1 has been about seven inches, 9 per cent below normal, and has added 1,780,000,000 gallons of water to the reservoirs. It is estimated that about 87 per cent of the total rainfall since the first of the year has reached the reservoirs. In January, 1,079,000,000 gallons of water were added to the supply, and during the month of February, when the precipitation was 2.58 inches, water storage was increased by 701,000,000 gallons.

In an appeal published March 17 in the State Health Department's monthly bulletin, Warren J. Scott, director of the Bureau of Sanitary Engineering, urged communities of the state to lose no time in making plans to increase their water supplies. Mr. Scott pointed out that some communities already face serious water shortages. In New Haven, however, the engineers say, it is likely that no restrictions will be placed on the use of water for lawn sprinkling or for other non-essential usages, unless there are unusually severe droughts later in the year.

Financial House Studies Water-Works Trends

RECOGNIZING A NOTICEABLE TREND IN MUNICIPAL FINANCING of water works and other utilities by the use of bonds payable solely out of revenue, and realizing the importance to buyers of these bonds, of knowing the customary charges and the potential number of users, Barus, Kindred and Co., a Chicago bond firm, have made an extensive study of rates and customer-counts basing their data on rate schedules published in THE AMERICAN CITY MAGAZINE.

In studying this information, they tabulated the cities into four groups according to population ranges. For each city, they listed the 1940 census, the customers, the ratio of population to customers, the billing period, the minimum water charge, the charge for 3 million gallons, and for 5 million gallons.

The usual billing, it was disclosed, is either monthly or quarterly. Very few accounts are billed semi-annually or annually. This insures a regular supply of income to the water works throughout the year.

It was further observed that regardless of the size of the city, the ratio of users to population, is very constant. The median ratio is one customer to every 4.4 people. Fifty per cent of the cities studied have ratios falling between a range of 3.7 to 4.7.

Most of the minimum charges, the report shows, are either $.50 or $1.00. The median monthly minimum charge for the cities under consideration comes to a figure of $.83, but 45 per cent of the municipalities reported minimums at the former figures.

Water charges, the report further disclosed, appear somewhat less in the larger municipalities. This may be attributed to the recognized fact that water-works expense does not necessarily increase directly with the number of users.

The 62nd Annual Meeting

A. W. W. A.

A Conference

on

Wartime Water-works Problems

Not a "Convention"

June 21-25

The Stevens Hotel

Chicago, Ill.

Water Softening at Kansas City

SOFTENING OF THE WATER AT KANSAS CITY will enable the housewives there to realize a saving in soap of about $350,000 per year, or about double the cost of the softening, according to L. P. Cookingham, City Manager, in his annual report on city activities.

According to this report, recently published, Kansas City water has a high degree of hardness, averaging about 215 ppm and reaching a maximum, during the winter months, when the flow is the lowest, of as much as 350 ppm. When the water is reduced to 90 ppm as contemplated by the present construction program in progress, the amount of saving in soap will reach the estimated figure of $350,000 quoted above. In addition the plant will remove minerals from the water that cause undue precipitation in residential and industrial piping, particularly in heating coils.

On at least three different occasions the people have approved at the polls the idea of softening Kansas City's water supply. The last approval was given in the ten-year bond program in 1931. Each time, for one reason or another, usually the fact that softening would add to operating expense, the mandates of the voters were not carried out. It was further thought that the expense of softening would necessitate an increase in water rates. However, these improvements are being constructed out of water revenues and, unless unforseen conditions arise due to national defense, additional operating expenses for softening the water will be borne by the department without increasing the rates.

As In '17——

IT'S LAYNE WATER SYSTEMS FOR THE ARMY, NAVY AND WAR NEEDS

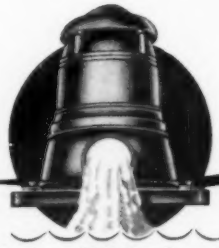
Built under extreme emergency and with amazing speed, thousands of Layne Wells and Pumps are providing billions of gallons of water for war needs—Army Camps, Flying Fields, Naval Stations, Ordnance Works, Chemical Plants, Munition Plants and numerous fortified outposts. Though built with utmost speed, those Layne Water Systems have the strength and ruggedness which will last for years and years.

Layne Well Water Systems, regardless of when, where or how speedily built, are the finest that can be constructed. They will faithfully fulfill their mission until victory comes, whether this year, next year or years from now.

Those men of the Army, Navy and Marine Corps who some day will return to civilian life may well remember that it was Layne who built the well water systems which helped to win the war.

In the meantime, essential civilian water supply service continues. The Layne organization is fulfilling its pledge of "Keep Them Flowing!"

LAYNE & BOWLER, INC.
Memphis, Tenn.



Nation-Wide Service

LAYNE-ARKANSAS CO. . STUTTGART, ARK.
LAYNE-ATLANTIC CO. . . . NORFOLK, VA.
SAVANNAH, GA. . . . . ORLANDO, FLA.
LAYNE-BOWLER NEW ENGLAND COMPANY,
BOSTON . . . . . MASSACHUSETTS
LAYNE-CENTRAL CO. . . MEMPHIS, TENN.
LAYNE-NORTHERN CO. . MISHAWAKA, IND.
LAYNE-LOUISIANA CO. LAKE CHARLES, LA.
LAYNE-NEW YORK CO. . NEW YORK CITY,
AND PITTSBURGH . . . . . PA.
LAYNE-NORTHWEST CO. MILWAUKEE, WIS.
LAYNE-OHIO CO. . . . . COLUMBUS, OHIO
LAYNE-TEXAS CO. . . . . HOUSTON AND
DALLAS . . . . . TEXAS
LAYNE-WESTERN CO. . KANSAS CITY, MO.
CHICAGO, ILL. . . . . OMAHA, NEBRASKA
LAYNE-WESTERN CO. OF MINNESOTA
MINNEAPOLIS . . . . . MINN.
INTERNATIONAL WATER SUPPLY, LTD.,
LONDON . . . . . ONTARIO, CANADA

The above companies are affiliates of Layne & Bowler, Inc., Memphis, Tenn.

LAYNE PUMPS & WELL WATER SYSTEMS

● IF YOU NEED MORE WATER — Layne will provide competent engineers who will cooperate in checking water bearing formations, size of wells necessary and the type of pumps that will operate at the lowest cost per million gallons. No obligation.

WORLD'S LARGEST WATER DEVELOPERS

Streets and Street Maintenance

Mt. Clemens, Mich., uses this Adams No. 201 motor grader with 31-hp gasoline engine for scarifying and blading the streets before paving with cutback asphalt

Big City Traffic Is Largely Local

TRAFFIC WITHIN THE LARGE CENTERS OF POPULATION is predominately of local origin, according to figures recently released by the Minnesota Highway Planning Survey. The proportion of local traffic decreases with the size of the community, it has been found from an anaylsis of road use data obtained from interviews with nearly 20,000 motor vehicle owners representing all occupational groups in all sections of Minnesota.

Travel on all roads and streets within the city limits of Minneapolis and St. Paul was found to be 93.6 per cent by vehicles owned in the Twin Cities, 3.5 per cent by vehicles from other urban areas, and 2.9 per cent of rural origin. Travel within the city limits of Duluth was 66.1 per cent by Duluth-owned vehicles, 2.7 per cent from the Twin Cities, 7.6 per cent from other urban areas, and 23.6 per cent of rural origin.

Travel within municipalities of 10,001 to 25,000 population was 68.9 per cent by vehicles owned in these places, 5.2 per cent from the three large cities, 6.6 per cent from other urban areas, and 19.3 per cent of rural origin. Travel within municipalities of 5,001 to 10,000 population was 55.1 per cent by vehicles owned in these places, 5.9 per cent from the three large cities, 9.7 per cent from other urban areas, and 29.3 per cent of rural origin.

Travel within municipalities of 2,501 to 5,000 population was 42.1 per cent by vehicles owned in these places, 22.8 per cent from the three large cities, 11.6 per cent from other rural areas, and 23.5 per cent of rural origin. Several places in this population group adjoin the three large cities of Minnesota, which accounts in part for the large percentage of traffic originating in those cities. Travel within municipalities of 1,001 to 2,500 population was 37.3 per cent by vehicles owned in these places, 20.9 per cent from the three large cities, 13.9 per cent from other urban areas, and 27.9 per cent of rural origin.

Travel on all roads and streets in rural areas was 54.8 per cent of rural origin, 17.5 per cent from the three large cities, and 27.7 per cent from other urban areas. On trunk highways in rural areas travel was 42.7 per cent of rural and 57.3 per cent of urban origin. On county, that is state aid and county aid roads, travel was 86.7 per cent of rural and 13.3 per cent of urban origin. On rural local roads and streets travel was 87 per cent of rural and 13 per cent of urban origin. "Rural areas" includes all unincorporated areas and all incorporated places of 1,000 or less.

Municipal Garage Data from Greensboro, N. C.

THE MUNICIPAL GARAGE OF GREENSBORO, N. C., has but four full-time employees and no part-time employees. The cost of operating the garage in the fiscal year ended June 30, 1941, was $30,713.29. All trucks and cars operated by the city, exclusive of Fire Department vehicles, traveled a 15 per cent greater distance than in the previous fiscal year, and the average cost per mile of operation was 10 per cent less. The average cost per mile during the last fiscal year was $.0276. A detailed analysis of the cost of operation is given in the table below:

Gasoline	$16,465.96	
Less refunds	572.54	$15,893.42
Oil		1,305.27
Alcohol		71.83
Repairs		8,472.45
Tires and equipment		3,537.03
Overhead		
Supplies and tools	548.05	
Salaries, undisturbed	481.32	
Miscellaneous	403.92	1,433.29
Total cost of operation		$30,713.29
Cost of equipment other than cars and trucks		5,002.75
Total cost operating cars and trucks		$25,710.54
Mileage cars and trucks		930,282
Average cost per mile		$ 0.0276

Cleaning Paved Streets in Jackson, Miss.

THE STREET-CLEANING DEPARTMENT OF JACKSON has 74.5 miles of paved streets to clean. There are nine 2½-yard dump-trucks and two flushers used by the Department, and one motor sweeper, used only during leaf seasons or on special occasions when the streets become unusually dirty. The gutter truck crews consist of one driver and three laborers per truck.

The Department operates two shifts: three night trucks for the commercial district, and six day trucks for the residential district. The night shifts, working through the commercial districts, have 9 miles of paved streets to clean. The gutters are swept every night, and the sidewalks are swept on Saturday nights. The six paved alleys are swept nightly

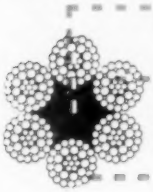
The day shift, using six trucks, sweeps the gutters in the residential districts. There are 65.5 miles of paved streets to be swept, which are cleaned one to three times weekly or as necessary. The crews clean and sweep back all gravel intersections. They also haul leaves and certain other street rubbish not collected by the garbage trucks.

For the period from October 1, 1940, to January 31, 1941, 3,275 gutter-miles were hand-swept, 302 gutter-miles motor-swept, 4,457 intersections were cleaned and cut back, and 3,262 gutter-miles were flushed.

H. L. Loflin is Superintendent of the Street-Cleaning Department.

WIRE ROPE PROTECTION

for All-out Production



DON'T gamble with All-Out Production. Give your wire ropes maximum protection. Wear, rust and corrosion must be held to a minimum . . . and will be when you use *Texaco Crater*.

Texaco Crater penetrates to the very core of wire rope, coating each wire in a tough, viscous film that cuts down wear, seals out moisture, prolongs rope life.

The outstanding performance that has made Texaco preferred in the fields listed in the panel has made it preferred on prominent construction jobs throughout the country.

These Texaco users enjoy many benefits that can also be yours. A Texaco Lubrication Engineer will gladly cooperate . . . just phone the nearest of more than 2300 Texaco distribution points in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York, N. Y.

THEY PREFER TEXACO

★ More revenue airline miles in the U. S. are flown with Texaco than with any other brand.

★ More buses, more bus lines and more bus-miles are lubricated with Texaco than with any other brand.

★ More stationary Diesel horsepower in the U. S. is lubricated with Texaco than with any other brand.

★ More Diesel horsepower on streamlined trains in the U. S. is lubricated with Texaco than with all other brands combined.

★ More locomotives and cars in the U. S. are lubricated with Texaco than with any other brand.

FOR YOUR ENJOYMENT
FRED ALLEN every Sunday night. See your local newspaper for time and station.

Care for your Car ..for your Country

TEXACO

TEXACO Lubricants and Fuels

FOR ALL CONTRACTORS' EQUIPMENT

HELP WIN THE WAR BY RETURNING EMPTY DRUMS PROMPTLY

Sewerage and Refuse Disposal

Sewer Service Charges As a Municipal Policy

THE QUEST FOR ADDITIONAL MUNICIPAL REVENUES has caused considerable interest in special charges for the use of the sewerage system, commonly referred to as "sewer rentals" or "sewer service charges." Sewer service charges have been defined as periodical charges to the users of a sewer system, whether owners or renters, based upon the extent of their use of the sewer system, or upon presumptive evidence of the extent of such use. The term is not used to include special assessment for sewer construction, fees charged at the time a sewer connection is made, or special general property taxes levied and earmarked for sewerage purposes.

At least 185, or 17.3 per cent, of the 1,072 cities over 10,000 make sewer rental charges. A higher percentage of cities above 100,000, and of cities between 10,000 and 25,000, make such charges than those of between 25,000 and 100,000. Of the cities over 100,000, the largest ones make the widest use of this source of municipal revenue. Sewer rentals are charged by 3 out of 14, or 21 per cent, of the cities over 500,000; by 7 out of 23, or 30 per cent, of the cities between 250,000 and 500,000; and by 5 out of 55, or 9 per cent, of the cities between 100,000 and 250,000. The larger cities use a multiplicity of bases of charges. Cities over 50,000 population rely almost exclusively upon metered water consumption or upon a percentage of the water bill as a basis of the charge, and all except 3 of the 30 cities surveyed use only one base. The 125 cities between 10,000 and 25,000 however, use a wide variety of bases for the charge, and frequently employ several bases in combination. Eighteen cities employ two bases, and one uses three bases.

Out of 185 representative cities using sewer rentals, 24 have no sewage-treatment plants of their own and are not served by treatment plants of other cities, while 18 have no treatment plants of their own but are served by those of other governmental units. Thus 143, or 77.3 per cent, of the cities have their own treatment plants. Of 146 cities, only 60, or 41.1 per cent, have issued revenue bonds—including three cities not served by a treatment plant. Fifty-six cities with their own sewage-treatment plants have issued revenue bonds to finance sewerage improvements.

—From the 1942 International City Managers' Association Municipal Year Book.

The Battling Garbage Scow

By HENRY A. FRAZIER
Secretary to the Mayor
Oakland, Cal.

Oh, the tang of brine was in the air,
  And the scent of garbage rank
When the gallant Oakland swill scow
  A Jap sub-raider sank.
She was loaded to the gunnels,
  With a putrid mass of gow
When the deadly Pig boat's runnels
  Were sighted off her bow.
She never quailed nor faltered,
  But her duty plain she seen
She never turned nor paltered,
  But plowed on through the green.

"Full speed ahead!" roared Cap'n Bill,
  The Tahoe lunged on fast.
She made the kill with tons of swill
  And rammed her hard avast!
All hail, Bill Vartnaw, hardy tar,
  Who sank that dirty raider,
We drink your health across the bar,
  There's one less foul invader!
So—sniff not at our lowly sloop,
  A-reek with offal stinks,
But place a pennant on her poop,
  For each Jap sub she sinks.

—From the United States Municipal News.

Seven Cities Plan Joint Sewage Facilities

SEVEN NEIGHBORING CALIFORNIA CITIES on the east side of San Francisco Bay have recently completed a joint survey of their sewage disposal problems, which resulted in a recommendation that the municipal plant now supplying water to these cities also should construct and operate sewage treatment and disposal facilities for the common use of the group. The cooperative survey was an outgrowth of the custom of municipal officials of the seven cities—Berkeley, Alameda, Oakland, Emeryville, Albany, Piedmont, and Richmond—to meet for discussion of mutual problems involving the area.

Taking the sewage problem to engineers, the cooperating officials were advised to have a survey made and to appoint one city as agent for the others in conducting it. An executive committee composed of the city managers of four of the cities and council representatives of the other three supervised the survey, authorizing the city of Berkeley to employ and compensate personnel. The cost of the survey, $48,000, was divided according to population, land area, and industrial concentration of the seven cities. Their contributions were placed in a trust fund which, along with other survey functions, was handled by the city of Berkeley.

The survey report of 549 pages and 104 plates recommended that 40-year serial bonds be issued to defray the cost of building the treatment and disposal facilities, estimated to cost $8,450,000. Each city has the right of independent action in the matter of providing funds for construction, but final decision will be made by voters at a bond election.

Service Charges for Refuse Collection

IN AT LEAST 75 CITIES, most of them with populations under 50,000, service charges are made for the collection of refuse from both business and private properties. In some of the cities the charges were adopted to secure additional municipal revenue to lighten general property taxes. In others, where general property taxes were not adequate to finance good refuse collection, the service charge was adopted to provide a reliable source of revenue for this function. Generally, according to a survey of the American Public Works Association, residents are thoroughly satisfied with the method, in some cases even voting it in.

Analysis of 25 of the cities shows that the charges levied are on one or more of 14 different bases, ranging from rates based on the measured volume of refuse to a uniform fee for each service.

To keep overhead collection expenses as low as possible, the cities usually try to combine billing for refuse service with bills used for water, electricity or property taxes, and the majority bill in advance. In seven of the cities the refuse operating departments collect the charges, while water departments collect in three cities and the general fiscal offices in eleven.

The refuse-collection charges in the typical city amount to 40 to 50 cents a month for the ordinary household for collection service covering garbage, ashes, and rubbish. Several cities, including Berkeley, Sacramento, and Fresno, Calif., pay the charges for very poor families from relief funds.

Refuse-collection charges date back to 1914 among the cities surveyed.

"GRANDPAPPY USED TO HOOK UP TO MATHEWS HYDRANTS"

Once you set Mathews Hydrants, you'll probably never dig them up again. Not only will they last indefinitely—you can see plenty with 50 and 60 years of uninterrupted service—but they can be inspected, repaired or completely modernized without digging. That's because Mathews Hydrants are always built with an outer protection case, through which the entire barrel, containing all working parts, can be unscrewed, lifted out, and repaired or replaced. Investigate this Mathews feature as a time-saver, a frost protection, and a vital air-raid precaution.

MATHEWS HYDRANTS

400 CHESTNUT STREET, PHILADELPHIA, PA.

ESTABLISHED IN 1803

Made by R.D. WOOD Company

MANUFACTURERS OF SAND SPUN PIPE (CENTRIFUGALLY CAST IN SAND MOLDS) AND R. D. WOOD GATE VALVES

Public Safety

From the 1941 report of Greenwich, Conn., first town in the county to change the threads of its hydrants and hose couplings to the National Standard

Fire Equipment for City Defense

FIRST ALLOCATION OF FIRE-FIGHTING EQUIPMENT, gas masks, stretchers cots, etc., under the recent $100,000,000 Congressional appropriations, will be made principally to certain cities within 300-mile coastal strips regarded as "target areas," according to James M. Landis, Director of the Office of Civilian Defense. Priorities among communities will be based on: (1) likelihood of attack, (2) vulnerability, and (3) importance to war production of manufacturing plants in the community.

Many towns of 10,000 population and over, located within the 300-mile coastal strip, are now included in the original tentative allocations but are not listed in the War and Navy Department as having manufacturing plants producing important war materials. Such towns, particularly those located more than one hundred miles from the coast, eventually may be left out of the allocation lists in favor of smaller towns where important war production manufacturing plants are located.

Fire-Fighting Equipment

Because great damage may result from the use of the fire bomb, auxiliary fire-fighting equipment is considered a basic element of the civilian-defense equipment. The War Production Board has ruled that self-propelled or trailer types of auxiliary fire-fighting equipment cannot be furnished, and that the types of equipment that can be furnished must be confined to the front-mounted pump and the side-mounted unit described below. All fire-fighting accessories, such as hose, nozzles, axes, ladders, are furnished with these pumpers.

The front-mounted pump unit consists of a single-stage direct-connected centrifugal pump designed for mounting on the front of a truck ahead of the motor. This pump will be equipped with 1,500 feet of discharge hose and certain standard items of equipment. It will be necessary for municipalities receiving this type of unit to supply an open-body truck with a motor developing at least 75 brake horsepower at a minimum of 3,000 revolutions per minute.

The so-called self-contained unit consists of a gasoline motor and a 500-gpm centrifugal fire pump on skids and weighs approximately 1,400 pounds. This unit will be supplied with 1,500 feet of discharge hose together with the necessary equipment. It is intended that these self-contained units and the accompanying equipment shall be mounted on a hose wagon or on the body of a truck that has a capacity of at least 1½ ton. The wagon or truck is to be furnished by the municipality.—*The American Municipal Association.*

Police Radio Binds Cities

AT LEAST 22 OF THE NATION'S LARGEST CITIES and a number of smaller ones operate intermunicipal police communication systems so organized as to play important roles in the war efforts of their areas, says the International City Managers Association.

Few if any changes are necessary to switch from normal peacetime activities to such war tasks as assisting in preventing flight of enemy agents across jurisdictional lines, checking sabotage and looting, and facilitating troop movements and civilian evacuation by coordinated traffic administration.

The cities bound together by police radio usually include a central city, which clears messages, and as many as 50 other police jurisdictions in the metropolitan area. In most cases, arrangements for the cooperative broadcasting are made merely by an exchange of correspondence, but eight of the cities in the report offer the service under formal contracts and five others have ordinances on the subject. Each community receiving messages generally installs and maintains its own receivers. Most agreements are for one-way communication.

St. Paul, Minn., has a typical arrangement whereby any municipality desiring to use the St. Paul police-radio applies to the commissioner of public safety, making a deposit for the service. The commissioner is authorized to grant a permit and make a $50-a-year charge for each car served by two-way facilities and $25 for one-way service. Calls in excess of 100 miles cost 25 cents.

Of the 22 cities with intermunicipal police radio systems studied in the report, three—Chicago, Cincinnati, and Cleveland—broadcast to more than 50 neighboring jurisdictions. These cities can make extensive radio blockades with their police communication systems. In five minutes, for example, the Chicago system can mobilize 500 squad cars in Illinois, Indiana, Michigan, and Wisconsin.

Pittsburgh broadcasts to 37 municipalities, St. Louis to 21, Buffalo to 18, Los Angeles and Milwaukee to 12 each, and Detroit to 10. Thirteen other central cities send police radio calls out to one to six nearby communities. Other cities broadcasting for their neighbors are Royal Oak, Mich.; Newark, N. J.; Berkeley, Calif.; and Rochester, N. Y.

Most of the large cities make no charge for messages dispatched for suburban police units. Among cities which make charges, and their fees for each message are: Cleveland, 42½ cents; Akron, 35 cents; and Cincinnati, 20 cents.

"Save Our Men"

THE ADOPTION OF THE ABOVE SLOGAN BY THE U. S. ARMY has a very definite correlation with the transition of our program of National Defense to that of Victory. At no other time has the conservation of man-power assumed the vital degree of importance that it holds today. A mere glance at the figures should bring home a realization of this necessity: 534 killed and over 17,000 injured in traffic in 1941 in Los Angeles, alone! A nation at war must conserve its human resources above all others, while its success, at the same time, depends upon the continuation and *acceleration* of its essential peacetime activities.

The accident-prevention program of the Los Angeles Police Department for 1942 will be primarily dedicated to the saving of lives and property. Let us, therefore, resolve that the popular fallacy that "life is cheap" during perilous times shall not be reflected in our driving habits during the year to come.

Los Angeles Police Department.

Keep Up-to-Date on New Equipment

Please check over the following list of interesting catalogs obtainable free of charge and either write direct to the manufacturers for their literature, or, if you prefer, put a circle around the identifying numbers below to indicate the catalogs you want, mail this coupon to The American City Magazine, 470 Fourth Ave., New York, and we will see that the catalogs are sent to you without expense or obligation on your part. 5-42

216 217 218 219 220 221 222 223 224 225
226 227 228 229 230 231 232 233 234
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Name ..... Position .....

Address .....

Insurance for Municipalities

216. The Engineering Department of The Home Fleet of Insurance Companies, 59 Maiden Lane, New York City, makes available to every city government a streamlined fire-insurance program based on an inspection and audit of each individual building. The policies include valuations that are recoverable values and the policies are uniform resulting in maximum protection at a minimum premium cost. Full information on request.

Sturdy Elevated Steel Tanks

217. Better water service is provided by Pittsburgh-DesMoines elevated steel tanks through improving the water pressure, reducing pumping costs, and maintaining a reserve supply for fire purposes. P.D.M. engineers will be pleased to confer with you, and Pittsburgh-Des Moines Steel Co., 3412 Neville Island, Pittsburgh, Pa., will furnish complete information on elevated steel tanks free on request.

Tested Cast-Iron Pipe

218. The hydrostatic proof test is an acceptance test for cast-iron pipe and is but one of a series of controls of the quality of cast-iron pipe at each of the plants of the U. S. Pipe and Foundry Co., Burlington, N. J. U. S. makes centrifugally or pit cast-iron pipe for water, gas, sewage, drainage, and industrial services and will send literature free on request.

Anti-Freezing Service Hydrants

219. Genuine Murdock anti-freezing hydrants have given satisfaction for almost 90 years as they stand wear and tear and resist the utmost of abuse to which hydrants are often subjected in public service. The reasons why they operate every day in the year without freezing in winter will be found in the catalog of The Murdock Mfg. & Supply Co., 426 Plum Street, Cincinnati, Ohio.

Loud Electric Horns

220. A small siren operated by a ½-hp motor and the Kodaire electric horns have the characteristics of an air horn and extensive audibility depending on obstacles in the path of the sound. For complete information on these types of electric air-raid-warning devices write to Schwarze Electric Co., Adrian, Mich.

Improved Water Meter Testing

221. Water-works superintendents realize the importance of better meter testing to lengthen the accurate service-life of meters between tests. Meters should be tested at established rates of flow. Information and literature regarding meter testing may be obtained by writing Neptune Meter Co., 50 West 50th St., New York City.

Clamps and Mechanical Joints To Stop Leaks

222. To make leakproof joints in cast-iron pipe connections where the standard methods are not sufficiently strong, Carson-Cadillac Co. suggest the use of the Carson Clamp and Mechanical Joint. Glands and bolts are made of corrosion-resistant charcoal cast iron and last as long as the pipe. Write for their free illustrated literature, addressing them at 1221 Pinson St., Birmingham, Ala.

Concrete Construction That Will Not Crack

223. By careful design and use of prestressed reinforcing in concrete structures, the customary unsightly cracks may be greatly reduced and in many cases eliminated. Cracks so eliminated will prevent damaging attack by the elements and insure the longer life of the structure. Full information regarding prestressed reinforcing design may be obtained by writing The William S. Hewett System, 20 N. Wacker Drive, Chicago, Ill.

An Effective Luminaire for Street or Defense Lighting

224. An entirely new luminaire—the L-M Prismalite—is now available for street and fence lighting. This light, it is asserted, is high in effective light output, low in maintenance cost, permanent in its characteristics and highly adaptable to varied conditions. For full information on this light, write to Line Material Co., Milwaukee, Wisc., and ask for L-M Bulletin 4131.

Valves for Water and Sewage Plants

225. Iowa valves for water-works filtration and sewage-disposal plants have been installed all over the world, in large cities and small villages. A catalog and other information will be furnished by Iowa Valve Co., Hubbell Bldg., Des Moines, Iowa.

Municipal Tax Consulting Service

226. The Cole-Layer Company, 11 West Monument Avenue, Dayton, Ohio, makes a specialty of its consulting service from municipalities and counties in supervising tax revaluations and appraisals. Full information concerning this service, which is of even greater importance today to municipalities than ever before, may be secured by writing direct to this company.

Quality in Small Engines

227. In places that require dependable operation of small engines, the Briggs and Stratton Corp. suggests investigating their 4-cycle, air-cooled gasoline motors with power varying from 2/3 to 6 hp. Literature on power requirements in ranges such as these may be obtained from Briggs and Stratton Corp., Milwaukee, Wisc.

Cutting Costs of Material Hauling

228. Developments in the Dempster Dumpster bucket has made possible a reduction in hauling costs for a wide variety of fields. Buckets have been particularly designed to handle trash and rubbish in a clean and efficient manner. Full information regarding these buckets may be obtained by writing for catalog No.-2-42 published by Dempster Bros., Inc., Knoxville, Tenn.

A Water-Tight Expansion Joint

229. To insure water-tight joints in concrete slab construction, the Servicised Products Corp. has developed a hot-poured seal of asphaltic rubber compound. This seal known as Para-Plastic has been designed for use with a non-extruding type of expansion joint and has been shown to be adaptable for temperatures ranging from below zero to 180° F. For further information write to Servicised Products Corp., 6051 W. 65th St., Chicago, Ill., and ask for catalog file No. 4E11.

Maintaining Accurate Level Control

230. In maintaining predetermined water levels within the range of 6-inch variation, the Clayton Mfg. Co. has developed a new type of valve operating on proven hydraulic principles. This valve, the company asserts, has the added features of allowing the water level to be changed easily while the equipment is in service. Accuracy is uneffected by atmospheric or line pressures. For full information and literature write to the Clayton Mfg. Co., Alhambra, Calif., and ask for the bulletin on Clayton Altitude Valves.

Hypo-Chlorination of Water

231. The Mathieson Alkali Works has recently published a new 74-page booklet entitled "The Hypo-Chlorination of Water." This is the fifth edition covering this subject presented by the firm, and presents a new answer to some of the old problems in this field. For your copy write to Mathieson Alkali Works, Inc., 60 E. 42nd St., N. Y. C.

(*Continued on page 17*)

WHICH OF THESE CATALOGS WOULD YOU LIKE?

(*Continued from page 16*)

Mixers for Multi-Stage Flocculation

232. A new folder descriptive of Rex Sanitation Equipment has just been published by the Chain Belt Company, describing and illustrating the Rex Slo-Mixers. These offer operators of sewage- and water-treatment plants the advantages of the Langlier Process of Multi-Stage flocculation. This folder may be obtained by writing the Chain Belt Co., Sanitation Equipment Division, Milwaukee, Wisc., requesting Bulletin No. 389.

Glass Enclosures for Sewage-Treatment Works

233. The uses of glass enclosures in sewage-treatment works are outlined in a new catalog issued by the American-Moninger Greenhouse Mfg. Corp., Brooklyn, N. Y. It explains the efficiencies derived from continuous operation of sludge beds and the control of odors. A copy of this catalog may be obtained by writing to the American-Moninger Corporation and asking for catalog No. GE31.

Sprinkling Filter Data

234. In organizing the recent developments in the use of the sprinkling filter, Pacific Flush-Tank Co. has issued a new booklet covering its design. This booklet contains late information on the use of sprinkling filters at modern high rates. For your copy, write to the Pacific Flush Tank Co., 424 Ravenswood Ave., Chicago, Ill., and ask for Data Book No. 130.

Concrete Paving Joints

235. The W. S. Godwin Co., Inc., has published a booklet explaining the Godwin joints in concrete construction. It presents authoritative requirements for load-transfer units and their installations and also compares competitive designs and their effectiveness both in service and in laboratory tests. A copy of this booklet may be obtained by writing to the W. S. Godwin Co., Inc., Baltimore, Md., for Booklet A-40 on "Concrete Paving Joints."

Controlling Liquid Chemicals

236. Developments in the use of the Pulsafeeder have been outlined in a recent bulletin published by Wilson Chemical Feeders, Inc., Buffalo, N. Y. This feeder is adaptable for handling practically all chemicals in solution form, not only of high but also of low viscosity and slurries of high sludge contents. For full information ask for the Wilson Chemical feeders bulletin entitled "The Wilson Pulsafeeder."

Simple Compact Water Meter

237. The Empire "Streeemline" Meter is, according to information furnished by the Pittsburgh Equitable Meter Company, the only oil enclosed gear train meter with but three interior castings, thereby providing simplicity and compactness, and eliminating wear and friction. For full information and literature regarding these meters write to the Pittsburgh Equitable Meter Co., Pittsburgh, Pa.

Economies in Pumping Costs

238. Important savings may be realized by the use of pumps that operate vertically. Complicated spread-out piping may be eliminated and full advantage may be taken of plant floor space. For full information and literature on pumps to fit into your water-works plant write to Pomona Pump Co., 206 Commercial St., Pomona, Calif.

Improved Fire Fighting Trucks

239. The Mack fire apparatus line includes triple and quadruple pumps from 200- to 1,500-gallon capacity, hose wagons, ladder trucks, and squad cars comprising 14 different specialized models. For full information and literature on how to meet the fire-fighting requirements of your community, write to Mack Mfg. Corp., Fire Engine Div., Long Island City, N. Y.

Conservation of Water Meters

240. The Badger Meter Mfg. Co. has assembled data pointing to maintenance cost as low as one cent per meter per year on their equipment. This, they point out, has been obtained without sacrifice of accuracy and sensitiveness. For information and literature on these meters write to the Badger Meter Mfg. Co., Milwaukee, Wisc.

Easily Changed Fire Hydrants

241. R. D. Wood Co. has developed the Mathews Hydrant which has a feature of being able to be moved by merely unscrewing the barrel from the elbow. This allows replacements at the minimum of difficulty and inconvenience. For literature and information write to the R. D. Wood Co., 400 Chestnut St., Philadelphia, Pa.

Accuracy in Water Meters

242. The Hersey Mfg. Co. asserts that its compound water meter will outmatch any single unit or battery of meters for capacity and accurate registration for all rates of flow. For literature regarding these meters write to the Hersey Mfg. Co., So. Boston, Mass.

(*Continued on page 18*)

These machines are representative examples of the wide variety of applications of Briggs & Stratton motors.
POWER TANK HEATER
POWER WINCH
SEED CLEANER
USERS . . . of Gasoline Powered Equipment know the Power is right when powered by "Briggs & Stratton."
Known to millions, the Briggs & Stratton trademark on the motor of gasoline-powered equipment is a distinctive emblem of dependable, economical, easy starting power . . . Trouble-free performance on a vast variety of machines, tools, and appliances — in governmental service, on farms, and in industry — has earned an extraordinary recognition for Briggs & Stratton air-cooled gasoline motors.
BRIGGS & STRATTON CORP.
Milwaukee, Wis., U.S.A.
4 CYCLE
BRIGGS & STRATTON
GASOLINE MOTORS

MODEL 37

★ 42 Years of Specialization in Sound Projection and Control Is Your Assurance of Satisfactory Performance When You Specify Sparton

The SPARTON Long Distance SIRENS — Models 37, 38 and 39, All-Directional Type — A series of big, high-powered electrical sirens. Particularly desirable for large areas such as municipalities, airports, government properties, industrial or defense plants, universities and public utilities.

General Purpose Siren — Model M 601 — A type used on Army Tanks. Projects a loud, piercing wail. For use on EMERGENCY VEHICLES, cars for Air Raid and Fire Wardens—Police—Fire and Ambulances. Same type used on U. S. combat vehicles.

All-Directional Type—Models 16 and 17 — A high quality electrical air raid and fire warning signal of the vertical type for general alarms. Designed for airports, industrial plants, small communities, factories, banks and government property.

Directional Type — Model 35 — A large, powerful siren especially designed for city downtown canyon areas at street intersections where signals must cut through congested traffic noise levels—also desirable for large industrial plants, railroad yards, docks, etc. Weatherproof construction for long life and unfailing service. Installation simple—easy and flexible.

Traffic Signal Light Blackout Shields — These blackout shields meet the demand for a device that eliminates visibility from the air, yet permits motorists to see the signal light. The O.C.D. advises that the Sparton Traffic Mask satisfactorily meets the requirements of the Bureau of Standards for obscuring traffic lights.

FREE CONSULTATION SERVICE

Sparton engineers will gladly advise on air raid signal problems. Mail coupon. No obligation.

AIR RAID TECHNICAL INFORMATION BUREAU
THE SPARKS-WITHINGTON COMPANY
JACKSON, MICHIGAN—PLANT ONE

Without obligation, I would be interested in your advice on my air raid warning problem. Please send me free questionnaire.

Name _____

Position _____

Street and Number _____ State _____

City _____

WHICH OF THESE CATALOGS WOULD YOU LIKE?

(Continued from page 17)

Making Water-Works Repairs and Extensions Easily

243. To make water connections quickly, to remove old stops and install new or larger ones, to insert pipe plugs, to do all these with the pipe remaining under pressure and without interrupting service, operators find the use of a drilling and tapping machine such as the one manufactured by the Mueller Co., Decatur, Ill. invaluable. Write to them for full information and literature.

Dependable Lubrication

244. Basing their statements on service in fleet-operated trucks, stationary diesel engines, locomotives, airplanes, buses, The Texas Co., 135 E. 42nd St., N. Y., offer lubricants that operate effectively in winter and in summer, that do not leak out at high operating temperatures and cause dangerous conditions to brakes. Free information and literature on lubricating problems will be supplied by writing this company at their New York address.

All Types of Water Conditioning

245. Pointing out its position in the field of water conditioning, and its wide range of equipment ready to handle any type of water problem, The Permutit Co., 330 W. 42nd St., New York City, is ready to answer questions regarding your water-treating problems. Free booklets and literature are available.

Directing Street Light with Refractors

246. Refractors control the light vertically and horizontally, shaping it to the specific job needs. The Holophane Co., Inc., 342 Madison Ave., New York City, state that their refractors are designed for high output efficiency and permit wider spacings to reduce operating and maintenance costs. For further information, write to them for their free book of specifications and installation methods.

Paving and Maintaining Streets with Tar

247. The Barrett Division, Allied Chemical and Dye Corp., have prepared a new manual on the uses of Tarvia and Tarvi-lithic paving materials for both construction and maintenance. This will be furnished free by writing to The Barrett Division of Allied Chemical and Dye Corp., 40 Rector St., New York City, and asking for the Barrett Tarvia Manual.

Wrought-Iron Pipe

248. A comprehensive discussion of the uses of wrought iron has been made available by the A. M. Byers Co., Pittsburgh, Pa., in a new 60-page catalog. Discussing uses of the pipe, and containing valuable tables of engineering data, this catalog is available by writing to them at the address mentioned above.

Speeding Construction with Air Compressors

249. To help your crews speed the job of building new water mains, sewage facilities, streets and bridges, the Gardner-Denver Co. offers its portable air compressor with ability to deliver full interrupted air output regardless of temperature or weather conditions. Bulletins giving complete information on their air compressors may be obtained by writing them at Quincy, Ill.

Improved Water Valves

250. The new Eddy Valve has a number of distinctive features. The gates are free to revolve on the trunnions so as to not always seat on the same position. For further details regarding these valves, write to Eddy Valve Co., Waterford, N. Y.

Fire Fighting with Street Flushers

251. The Model 5 Street Flusher manufactured by the Standard Steel Works will, in addition to its functional duties of keeping a street thoroughly clean, furnish an effective fire stream of 67 feet through a 1⅛-inch nozzle and 50 feet of 2½-inch fire hose. For full information regarding this street flusher, write to Standard Steel Works, North Kansas City, Mo.

Streamlined Motorcycle Operation

252. Police officers will appreciate the Spring Frame construction of the Indian motorcycle that assists in ironing out tough roads and reducing strain and fatigue. Indian Police Specials, it is asserted, are the "pride of the force" wherever they are used. For information and literature on how the Indian motorcycle may fit into your police protection system, write to the Indian Motocycle Co., Springfield, Mass.

Water-Conditioning Equipment

253. For more than 30 years Graver has specialized in the design and manufacture of water-conditioning equipment of all kinds. This company invites you to submit water samples to them for unbiased analysis without cost or obligation. For literature on their water-conditioning equipment, write to the Graver Tank & Mfg. Co., Inc., 4809-13 Tod Ave., East Chicago, Ind.

Vol. LVII, No. 5 The American City May, 1942

The City and the USO

By Richard A. Martinsen
YMCA National Council

THE comfort, well-being, and proper conduct of the serviceman during his visits on leave or in transit through a community are essentially a municipal responsibility. Acceptance of this principle by the United Service Organizations was immediate and inherent in the organization's policy, a policy which in some cases has been misinterpreted as competitive. It is pleasant to be able to report, at the close of its first year, that most of the cobwebs have been brushed away, and USO is now an integral part of the American wartime scene in some 5,500 cities and towns.

Much of the progress in municipal relationships is due to municipal and civic leaders themselves. Obviously an undertaking to which some 30,000,000 Americans have contributed in one way or another must be of the people. Inasmuch as the bulwark of USO support is the urban area and all save one or two of the 419 clubhouses so far established are in communities, the whole enterprise is logically municipal. Consciously or otherwise, all municipal officers are in fact officers of the USO, importantly part and parcel of the USO movement. The point is that, fortunately for USO, most community leaders, whether in public or private life, are gallantly aware of it.

The Setup

Innumerable developments of the past twelvemonth point the wind. Last year, in its first fund campaign, USO tied into sixty Community Chest or other over-all city campaigns. This year it will be part of well over two hundred joint campaigns. The joint-campaign quota tops the $11,000,000 mark, no mean portion of the $32,000,000 the government has authorized USO to raise. Reference to government, here, is pertinent.

Although the entire USO Municipal Committee of Lebanon, Pa., meets when the occasion demands, Director John M. Durno confers frequently with the key members pictured here. Left to right: Major Harry D. Case, Chairman, Lebanon County Defense Council; David S. Hammond, Secretary, Chamber of Commerce and United Welfare Fund; Mayor C. Ray Bell; Charles B. Webb, President, Chamber of Commerce and Chairman of Lebanon County Rationing Board; and Director Durno

The Red Cross and USO are the national war-work agencies fully accredited by the Administration, the War and Navy Departments, and officialdom in general, the Red Cross for what its name implies, the USO in the recreation field. They are the only organizations so accredited.

Whether or not USO is the right set-up to do the job is immaterial now that time is of the essence. It straddles the continent and reaches myriad points beyond our shores. Red tape in its relationship with the municipalities and contrariwise, technicalities of jurisdiction and authority, niceties of procedure, are equally immaterial. These are the times to cut red tape and batten the hatch on petty prerogatives. The six agencies* constituting USO, great welfare organizations all, have cheerfully submerged their entities in the field. Canvass the long rows of executive cubby-holes at the USO national office and you'll find the occupants sincerely less concerned over flaunting the USO banner than in getting on with the job.

Objectives and Controls

The USO objective is simply stated: wholesome recreation, relaxation, and distraction of men in uniform from service chores—a refreshing contrast to the stern calls of discipline. Wartime programs must be kept flexible to meet wartime emergencies. USO was planned primarily to aid overwhelmed camp communities, and its field is confined to activities in camps and defense industry areas. To avoid conflict, a sharp line was drawn between the functions of USO bodies and those of the numerous county and city defense

* The agencies comprising The United Service Organizations for National Defense are: The Young Men's Christian Associations; The National Catholic Community Service; The Salvation Army; The Young Women's Christian Association; The Jewish Welfare Board; and the National Travelers Aid Association.

councils, committees for defense recreation and committees for soldier hospitality, which sprang into being a year ago. Practical expediency has softened and diffused the line. For one thing, municipalities are more fund-harrassed than ever by the war emergency. The spirit is willing but the pocketbook is weak. Even last year funds for use of many a local committee were included in the local USO quota. This year USO expects to turn back some $3,000,000 to the municipal welfare-for-servicemen committees, without in any sense—one hastens to add—attempting to cut in on the administration of the same. So, far, occasional requests for an acknowledgment—"in cooperation with USO"—seem reasonably mild.

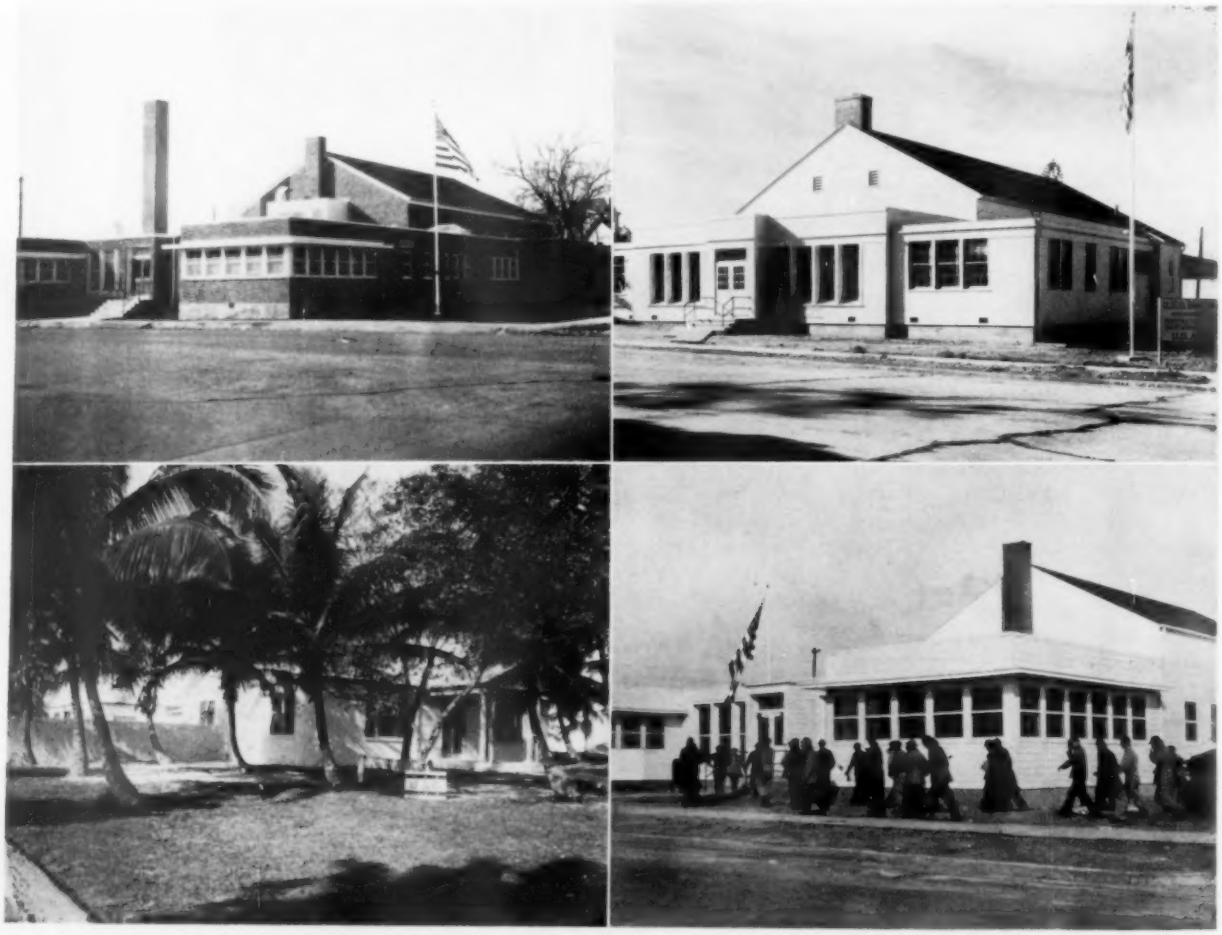
USO itself is not so unrestrictedly fancy-free. Its accounts, in effect its entire program, are subject to government audit and scrutiny. Specifically, government agencies do not undertake to tell USO what it shall do, but what it cannot. Title to the 161 government-built clubhouses and the 28 government renovations, almost half of USO's working equipment, remains vested in the government. The structures are merely leased to USO. The ultimate disposition of these properties is the subject of much speculation, but the USO's hopes and aims are to imbed them permanently as welfare centers in the communities where they stand.

Local Cooperation Is Important

The degree in which USO and the YMCA, in its conduct of the 142 clubs it is currently operating for USO, are attempting to make these centers fundamentally local, and hence in a sense municipal, is not sufficiently known. The Committee of Management for each YMCA club is entirely local, with very real powers of supervision and control. USO Councils, in communities where two or more units exist, are chosen similarly. The advantages, the problems, the responsibilities very definitely rest on local shoulders, and the result has been extremely satisfactory to date.

Except for limited financial aid to local service centers, USO has confined itself to volunteer campaign groups and advisory committees in the so-called "leave cities," the largest centers of population which sooner or later are magnets for most servicemen. Its intent is to supplement the work of local groups upon request and only to the extent desired. However, the lounges for troops in transit, which it is establishing at major railroad terminals, could technically be construed another exception. They are at all events a valuable auxil-

(Continued on page 70)



In nine months of operation, USO has established 419 clubhouses for service-men in 44 states. The four shown above are in widely separated sections of the country. Upper left: Lawton, Okla.; upper right: La Jolla, Calif.; lower left: Key West, Fla.; lower right: Morehead City, N. C.

Why Should a Municipality Own Its Electric Utility?

Analyzing Some of the Questions That Face the City Considering Municipal Ownership of Its Electric System

By R. E. McDonnell
Burns and McDonnell Engineering Co., Kansas City, Mo.

IN THE the United States there are 2,406 communities owning their own light and power systems, not including a number of cooperatives or REA districts.

The change from private to municipal ownership has been gradual, increasing rapidly in recent years, due in some measure to the fact that the Federal Government has been engaged in the power business through the establishment of federally owned power projects that are now supplying electricity directly to the municipalities that have acquired ownership of the distribution systems. There are 63 of these federally owned power generating projects, twenty-three of them operated by the Tennessee Valley Authority. These projects are hydro, steam, and diesel. The majority of them are hydro, the largest of these being the Grand Coulee plant which, when finished, will have sufficient generating power to supply a population equal to New York City and Chicago combined.

Incentives

The incentives that have caused cities to think about owning their own utilities have been:

1. The opportunity to obtain electric service at lower costs to the consumer
2. Improvement in electric service by virtue of having an independent generating source
3. The opportunity to have a revenue-producing municipal utility able to carry not only its own load, but also some of the general tax obligation as well.

Mr. R. E. McDonnell, senior member of Burns and McDonnell Engineering Co. His firm has been retained for consultation on municipal electric problems in over thirty-eight states

Electricity in the home has become a most important factor. A few years ago the electric bill was merely for lighting. At the present time the electric bill is for cooking, heating, cleaning, washing, ironing, refrigeration, and air-conditioning, with electricity doing the work of several servants. It is indispensable in the modern home, with the result that the average annual electric bill grows higher each year. The average use of electricity in the home has jumped in ten years from 578 kwh to 986 kwh.

The average price paid for electricity declined from 6 cents in 1930 to 3.81 cents in 1940. Thus, the annual use of electricity for domestic service has increased 75.3 per cent and the average rate has decreased 36.5 per cent.

The cost of generation, transmission, and distribution of electricity has gone down remarkably in recent years. There is no longer any mystery as to what it costs to generate electricity, what the loss and cost of transmission is, or what the distribution costs are. Municipalities that own and operate their own utilities have freely made known the results of their accomplishments until now we have hundreds of cities wondering why electricity in their community is costing 30, 40, or 50 per cent more than in some neighboring city that owns its utilities.

Electricity, the article produced, is the same regardless of ownership. It is a standard product, producing the same results when used. There is little or no difference between the generation costs under municipal or private ownership; a pound of coal, a barrel of fuel oil, or falling water produces just as many kilowatts for the public as it does for an individual.

Regulation Not Enough

Some may hold that because we have an elaborate system of regulatory commissions—local, state, and national—which protect the public in the matter of rates and service, there is no need of public ownership. Many of our states passed what were considered ideal regulatory laws and established high-minded, well-meaning commissions. It was soon found that many of our commissions owed their retention and their office to the holding companies. If a well-meaning commission would authorize a reduction in rates, its decision was promptly appealed and carried into the higher courts. So, in the final analysis the courts were really the regulators of rates—not the commissions.

When a city carries a case to a commission, a preponderance of testimony is offered by the com-

pany. The company is always well and ably represented by attorneys, accountants, engineers, statisticians, and rate experts and will often spend ten dollars in defending the rates to the city's one dollar in protesting them. As a result, the decisions are often one-sided, and the procedure is so expensive to a municipality that it hestitates to undertake the task of appraising the property and going before the commission for a hearing on rates.

Every effort to abolish state regulatory commissions brings the utility companies to their defense. And, in the enormous expense of regulating rates, the public pays, through excessive rates, the bill for both sides of the controversy.

It is the failure of regulation that has caused many cities to turn to public ownership. Willis J. Spaulding, Commissioner of Public Property at Springfield, Ill., which city has both a private and a municipal electric utility, says that the regulation of utilities by the commission of Illinois has become a scandalous and almost tragic failure. He further adds that the one municipal plant at Springfield has done more toward bringing down rates and regulating rates in Illinois than all the commissions since their inception.

For 15 years the Burns & McDonnell Engineering Co. has published "Results of Municipal Electric Systems," and the last edition records the rates, earnings, cost of production per kwh, and other information pertaining to 756 municipal systems. This group may be considered a fair cross section of all the municipal plants in the United States. Some of the figures are:

55, or 7.3%, of these are competitive systems where both private and municipal operation prevail. Some of these larger competitive systems are in Seattle, Cleveland, and Springfield, Ill.

417, or 55.2%, generate their own power.

289, or 38.2%, purchase their electricity wholesale.

50, or 6.6%, purchase a part and generate a part of their electric energy.

144, or 19.1%, use steam to generate their electricity.

209, or 27.6%, use diesel engines.

A remarkable discovery made was that 298, or 39.4 per cent, of these municipal plants are entirely debt free.

Taxes

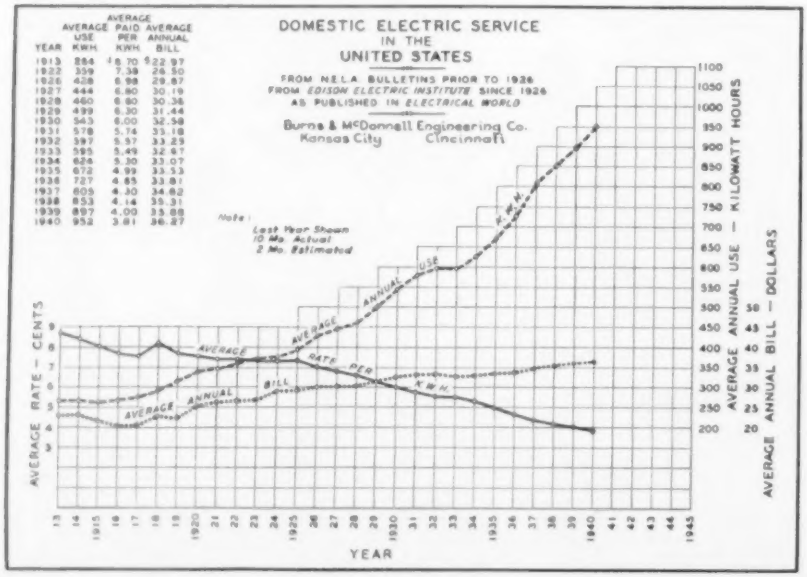
One of the first questions municipal officials ask when they are concerned about establishing a municipal plant is, "How about taxes?"

It is frequently charged that the rates of municipal systems are lower than the rates of privately owned systems because the municipal systems are not required to pay taxes. However, in reviewing the 2,406 municipal systems throughout the country, it is found that a vast majority of them pay taxes into the city treasury in an amount equal to the volume of taxes paid by the private company when it owned the property. The equivalent taxes paid by municipal systems include free service, cash donations to governmental departments, and miscellaneous taxes.

The combined total of taxes, net cash contributions, and free service during the fiscal year 1940 was approximately 26 per cent of the gross revenues. The Federal Power Commission reports that 13.2 per cent of gross revenues were paid in taxes by privately owned utilities. Thus it will be seen that approximately twice as much in the form of taxes or free service is paid by municipalities as by private utilities.

Taxes based upon "base revenues" of privately owned utilities show that they have paid 14.4 per cent of the revenues for taxes and net contributions, and the publicly owned paid 18 per cent of their "base revenues." In addition, the publicly owned utilities furnished a free service estimated at 8.8 per cent of their base revenues. Thus, it will be seen that the total taxes, net cash contributions, and free services, as measured by "base revenues," is 14.4 per cent for the privately owned utilities and 26.8 per cent for the publicly owned.

This is the first of two articles by Mr. McDonnell discussing municipal electric problems. The second—analyzing the "how" of having a municipal electric system—will appear next month.


DOMESTIC ELECTRIC SERVICE
IN THE
UNITED STATES
FROM NELA BULLETINS PRIOR TO 1926
FROM EDISON ELECTRIC INSTITUTE SINCE 1926
AS PUBLISHED IN ELECTRICAL WORLD
Burns & McDonnell Engineering Co.
Kansas City Cincinnati
Note: Last Year Shown 10 Mo. Actual 2 Mo. Estimated
AVERAGE RATE — CENTS
AVERAGE ANNUAL USE — KILOWATT HOURS
AVERAGE ANNUAL BILL — DOLLARS
YEAR
AVERAGE USE KWH
AVERAGE PAID PER KWH
AVERAGE ANNUAL BILL
1913 284 $.08 $22.97
1922 359 7.38 26.50
1926 428 6.98 29.87
1927 444 6.80 30.19
1928 460 6.60 30.36
1929 499 6.30 31.44
1930 543 6.00 32.58
1931 578 5.74 33.18
1932 597 5.57 33.25
1933 595 5.49 32.67
1934 624 5.30 33.07
1935 672 4.99 33.53
1936 727 4.65 33.81
1937 805 4.30 34.62
1938 853 4.14 35.31
1939 897 4.00 35.88
1940 952 3.81 36.27

The use of electricity has been growing steadily while the average rate per kwh has shown a consistent drop. The average bill has shown only a nominal increase

City Tax Rates Compared

The Municipal League of Indiana made an investigation and comparison of the tax rates of cities owning no utilities and cities that own their water and lighting plants. Of the 27 cities owning neither water nor lighting utilities, the average civil city tax rate was $1.1347, while the average civil city tax rate of the 25 cities owning both water and lighting utilities showed a rate of $0.5542. The civil tax rate of the cities owning their utilities is less than half the rate where the ownership is private.

These facts indicate that a city official's fears of a municipal electric plant's increasing taxes are without foundation.

In its 20th annual report, the Federal Power Commission has made some startling comparisons based upon rates in effect January 1, 1941. The average of the ten lowest bills for 100 kwh, in both municipal and privately owned plants in cities of more than 50,000 population, was $2.57, and the average of the ten highest bills for 100 kwh was $5.18. The majority of the cities listed in the "ten lowest" bills have municipally owned electric utilities. The two charts show the highest and lowest bills for 25 kwh and 100 kwh respectively.

This annual report of the Federal Power Commission shows that the prevailing difference exists not because the plants are operated by hydro or federally owned power, for we have many steam plants throughout the country which are now selling electricity as low as, or lower than, the Tennessee Valley plants. For example, Springfield, Ill., sells 250 kwh for $4.80; Kansas City, Kans., for $4.95. These are both steam plants, using coal for fuel, and yet they sell electricity at a lower price than Chattanooga,

Note the preponderance of municipal plants in the low-bill table shown above

Knoxville, Nashville, or Memphis So, it cannot be said that the TVA rates are for a favored few. Equally low rates are available to the cities that might establish their own steam generating plants.

No city should establish a municipal electric utility without at the outset establishing a non-political board for its management and operation. It is fast becoming the universal policy of cities to establish, in a manner similar to school boards, utility boards of citizens for the management and operation of the municipal electric system. Cities enjoying this utility-board management report no changes in the employees because of politics. We have some fine examples of these non-partisan managements in such cities as Los Angeles, Lansing, Kansas City, Kans., Fort Wayne, Knoxville, Chatanooga, Memphis, Nashville, and many others. These utility boards usually prepare 10- to 20-year programs for the development of the municipal utilities within their cities.

How to go about municipal ownership cannot be told simply because the obstacles toward establishing a municipal plant are never the same. Such ownership does require, however, one prerequisite, and that is that the city select officials of known integrity and loyalty to a municipal cause.

• • • —

It Is Not Enough to Make Plans

MUCH has been written on getting beyond the mere plan-making stage to planning action, but there have been too few practical suggestions on implementing plans. An original and substantial contribution to this need is a study of "Urban Planning and Public Opinion" by the Bureau of Urban Research of Princeton University, which presents a scientific approach to the understanding and use of public opinion, not only in carrying out plans but in integrating them with public needs and desires. Excerpts from the Introduction follow:

Public participation is the backbone of successful planning accomplishment. "What is known about urban planning and redevelopment is only important when it is put to active use by city builders and rebuilders, and this cannot be done unless John Q. Public, the yes-and-no man, shares the knowledge, understands it, believes it can benefit him and demands its use." Without this backing, plans must remain on paper while the more tangible effects of disorganization in cities multiply in number and severity.

The results of the survey indicate that valuable information for planning can be gathered by means of short public opinion polls of a selected "sample" of the local population, and the methods used in developing the questionnaire and in taking the poll emphasize that the work involved is neither unduly complicated nor costly.

Local Public Opinion Surveys

The development during recent years of the sample public opinion survey presents planning bodies with a valuable mechanism which they cannot afford to disregard. This new tool can be used in several ways. Public desires can be tapped as part of the formulation of certain programs. It is possible, for instance, to approximate the demand for apartment, row or single-family housing and for home-ownership as important factors underlying the design of a new community or redeveloped area. Reactions and resistance to particular proposals can be discovered and evaluated, in order that educational programs may be focused accordingly. In this way, for example, some light can be shed upon the reasons why the voters in some municipalities have been persuaded that school loans are more to be desired than highway, sewer and other loans—even when the latter are more urgently needed.

By means of the public opinion survey some of the more fundamental motivations can be studied, and a reliable answer found to such a vital question as whether the urban populace is moving to the periphery because of a desire for more sun, air and open space, because of attempt to escape city taxes, or a combination of both. Surveys can also provide a scientific measure at regular intervals of the success, failure and particular weaknesses of urban planning activities. In addition, by raising unfamiliar questions or new approaches to a problem, the public opinion survey can serve as a means of education, stimulating the thinking of the public and broadening the point of view of the many different professions concerned with cities.

The second purpose of the study was to ascertain the extent to which the average citizen is interested and informed concerning his own neighborhood, town and local government; his familiarity with the idea of city planning; an indication of what his behavior might be if his daily life were disrupted by planning programs; and lastly, whether he would rather live in the city or in the country.

"Although planning programs in cities have often been delimited in scope because of uncertainty concerning public reaction, this survey would tend to indicate that the majority are not necessarily averse to proposals involving extensive dislocation, provided they believe ultimate improvement will result. There would seem to be no reason why planning programs should not be realistic and even drastic, when necessary. It is entirely possible that "half-way" measures may defeat themselves, for they are not likely to produce the effective results which are apparently the foremost consideration in the public mind.

The third objective of the study was to outline in simple form the technique utilized in making the survey and tabulating governments and other organizations which may wish to conduct surveys of local public opinion as a part of their planning efforts.

PHOTO BY LANGLEY AVIATION CORP.

Urban Land Use and the New Mobility

Air Transport As a Factor in City Rebuilding

By KATHERINE PERRING *and* MELVILLE C. BRANCH, JR.
The Bureau of Urban Research, Princeton University

WHILE cities are striving to adjust their internal patterns to changes in land use brought by the automobile, another mode of transportation—the airplane—foreshadows the necessary adaptation of American cities to a new mobility in the air. Throughout the centuries, urbanization has been retarded or accelerated by the technical development of modes of transport. A history of urbanism could be written in terms of man's use of animal and motive power, and his mastery of the arts of road building and navigation.

Since ancient times, wars have stimulated advances in transportation technique. The wagon was perfected because the Persians devised better military chariots. During the first World War, the horse was replaced by the gasoline engine, and the truck was developed as a means of moving materials and men between cities, camps, and ports. In 1915 there were only 136,000 trucks in the United States. At the conclusion of the War in 1918 there were 1,000,000.

The rapid development of military aviation during the present world-wide conflict has greatly increased the number and size of airplanes. The capacities of the American aircraft industry for the production of planes, engines, propellers, and parts are being expanded to a degree undreamed of before the outbreak of hostilities.

Predictions by Aviation Authorities

When hostilities cease, there probably will be many thousands of idle aircraft. The post-war world will inherit also the aircraft production plants, trained pilots, and mechanics. What will be done with the apparatus and personnel? It is believed by some authorities they will be used to develop a new industrial frontier. According to Eddie Rickenbacker, "If we start mapping our program now, the aviation industry will do more for the United States than the automobile industry, as far as our national economy is concerned." When Henry Ford was asked what he would do with his airplane assembly and engine plants at the end of the war, he replied, "We are going to keep on making airplanes. Thousands of them will be used in the future. Planes that rise vertically from small backyards will be used in the future and they, with other types, will supplement the automobile for transport and travel."

> ***"If people take no care for the future, they will soon have to sorrow for the present."***

Eddie Rickenbacker believes that idle airships should be used to carry most first-class mail. He estimates this would require 10,000 transports, as compared with 300-odd commercial planes in operation today, and 80,000 pilots and co-pilots instead of the 2,000 employed today. Grover Loening, associated with a number of aircraft manu-

facturing and airline companies as consulting engineer, has said: "At the end of the emergency the enormous production facilities that have been developed will need a market, and no market will be more tempting than cargo-carrying by air . . . load-carrying planes, bombers, delivered into a second-hand market status, will be used for the carrying of all manner of goods and flown by all manner of ex-war pilots." Selig Altschul, aviation analyst and writer, maintains that "the flivver plane offers the promise of being that vehicle which may serve as the new product of a new industry to provide a substitute stimulus during the post-war readjustment period."

Every indication points to an increased use of the airways in the post-war period for the transport of goods and persons. Cargo transportation, private flying, and commercial passenger transportation will all be affected.

Certainly no one can predict the future of air transportation, nor is it possible to indicate along what precise lines further development will take place. At the turn of the century it was not known what type of automobile — gasoline, electric, or steam — would be the car of the future, and it is futile to attempt to forecast today the status of air transportation in 1950 in the light of the astounding progress which has been made in the last twenty years. However, it is clear that the growth of aviation will create in the future problems of a new character. The generation now reaching manhood has never known a world without airplanes. They accept transportation through the air as being completely natural and desirable.

Should Eddie Rickenbacker's predictions come true of 50,000 commercial transports, wide-spread private flying, and the aviation industry the keystone of United States economy, there will be extensive repercussions upon urbanism. The demand for landing and storage facilities will surpass anything yet witnessed.

Even more serious than the airport problem within urban areas will be changes in habits of living and changes in the manner of conducting business. Gill R. Wilson, director of several aviation enterprises and a recognized spokesman for the industry, foresees the airport of tomorrow as a magnet to attract the various forms of industry in which the time factor has a predominant significance. Private industry may develop ground facilities so that merchandise may be shipped by air directly from a factory airport. Mr. Wilson believes that more airports will be relocated to accommodate industry than will be moved to accommodate passenger travel. This suggests that some industries may have to move to locations where land for airports is available.

Rooftops or Backyards for Landing?

One of the crucial factors determining the future course of aviation is the further development of the helicopter or the autogiro, both of which lift and land vertically. Experimentation is also being made for an air pick-up system, basically similar to the pick-ups used by fast mail trains, whereby a cargo plane in flying over a loading and unloading station could drop a cable with hook attached which releases and secures sacks or packages in one operation. For this operation a rooftop is as suitable as an airport.

The "pickaback" plane has been successfully demonstrated in trans-Atlantic service. It is possible that such small planes mounted on and launched from a transcontinental carrier could leave along the route with freight consigned to local points, pick up cargo, and fly back to overtake the transport. Development along this line will give rise to the growth of small local airports. Passenger lines could develop local feeder lines, bringing new passengers to big ports, thus increasing their traffic. It is entirely possible that a safer form of the lighter-than-air craft may carry hundreds of passengers on transcontinental or transoceanic voyages, receiving and discharging passengers along its route by means of small planes carried within the dirigible.

What does this anticipated expansion in air transportation foreshadow for future urban land patterns? Precise answers will be revealed only as further evolution in man's use of the air takes place. If the technological development of an inexpensive and practical autogiro or helicopter is achieved, if rooftops are used as landing fields and the upper floors of buildings for the storage of planes, there will be a different effect on urban land use than if the present type of plane multiplies in number and the need for the existing kind of airport increases greatly. In either case, or if these developments take place simultaneously, there is every indication that the growth of air transportation will require more open spaces within the central areas of cities and along their peripheries. A number of the newer air terminals have already approached their capacity, and the expansion of commercial air transportation has hardly begun. In addition, there is evidence that certain industries have already included among their reasons for relocation a desire to obtain space adjacent to their factories for the landing of cargo planes.

More Open Areas Needed Within Cities

There has been for some time a growing acknowledgment of the need of providing more open areas within cities. Solutions to many of the serious automotive terminal and parking problems — resulting from the last great change in the mode of transportation — will require such action. Municipalities are facing the necessity of acquiring areas of publicly owned land, other than that used for streets, parks, cemeteries, and public buildings. A recent nation-wide study of parking indicates that large-scale municipal parking offers the greatest hope of effectively dealing with this phase of urban congestion. Aerial photographs of the larger cities in the United States reveal that numbers of centrally located buildings have been demolished and never replaced, but these small unrelated spots have not provided adequate space for parking and other needs. The difficulties and expense of acquiring sites for public housing and other important municipal improvements are focusing attention

(Continued on page 70)

Chemical Poisoning of Municipal Water Supplies

Thorough Water Analyses and Careful Guarding of Water Systems Should Give Ample Protection against This Danger

By HAYWOOD M. TAYLOR
Associate Professor of Biochemistry and Toxicology
Duke University School of Medicine
Durham, North Carolina

SO FAR as I have been able to find in consulting the literature available to me, there have been no instances, either during this war or the last, of intentional poisoning of water supplies by the use of chemicals. During the last world war, local supplies were occasionally rendered unfit for use by the military use of poison gases. An occasional small water supply was rendered temporarily unusable by the addition of manure or some dead animal, but I do not recall any successful attempt to poison even a moderate-sized water supply.

The chemical poisoning of a large water supply presents a number of very real difficulties. To produce a lethal dose of toxic materials would require such a large amount of chemicals as to make the undertaking almost prohibitive. The sale of poisons in this country is so well controlled that the purchase of amounts sufficient to be of use would immediately create suspicion. On the whole, the chemical poisoning of water supplies is intriguing to think about, but difficult to accomplish.

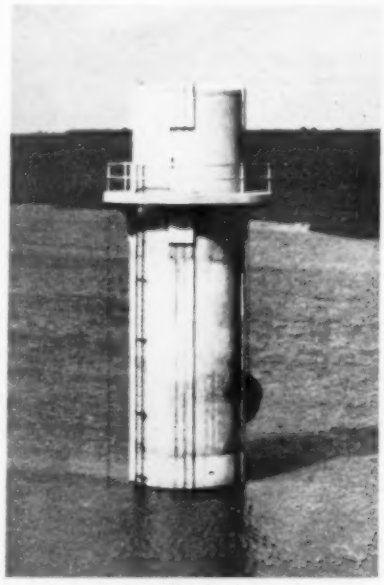
For purposes of discussion, we may classifiy the chemical agents in the following groups:

1. Heavy metals
2. Cyanides
3. Organic arsenicals
4. Organic materials like phenol, cresol, etc.
5. Alkaloids
6. War Gases

Heavy Metals

The first of these groups, heavy metals, includes the soluble salts of lead, arsenic, and mercury. There are, of course, several others, but at the present time they may be dismissed as relatively ineffective.

Acute lead poisoning would be very difficult to produce, but a low concentration of lead, administered over a long period of time, probably would result in chronic poisoning. A concentration of 0.25 ppm may definitely cause chronic lead poisoning, and 0.1 ppm is considered by many to be toxic. Epidemics of poisoning have been caused by the use of lead pipes in which the lead content in the water may vary from 0.5 to 14 ppm. If the water runs high in chloride, sulfate, carbonate, or alkali, the lead salts are less soluble and, as a result, less dangerous. High concentrations under these conditions produce a turbidity or milkiness in the water.



A view of an intake tower for an impounding reservoir

Arsenic, like lead, is a cumulative poison, is excreted very slowly over a long period of time and, as a result, may cause chronic arsenic poisoning. Acute poisoning would be difficult. A concentration of 0.01 grains per gallon is considered toxic. Antimony, selenium, and tellurium salts have essentially the same action as arsenic except that they are not as readily absorbed, are noncumulative, more rapidly excreted, and less toxic.

Mercury salts must be ionized in order to be toxic. It is difficult to state the toxic concentration in water because little work has been done along that line. Most of the mercury salts would be precipitated in the normal water treatment. They are expensive and are becoming more difficult to obtain.

Cyanides, Organic Arsenicals, and Phenols

Cyanides are commonly used in fumigation and in rodent control. Fortunately they are very unstable even in air and soon react to form nontoxic materials. Concentrations of 30 to 60 ppm may be toxic.

Most organic arsenicals are nontoxic. The notable exceptions are those compounds which are used as war gases, and they will be considered with that group.

The toxic level of most organic compounds such as phenols and cresols is rather high and cannot be stated with accuracy. In general, the phenols and cresols produce a noticeable taste in very low concentrations. As little as .002 ppm of phenol, for example, when in the presence of 0.3 ppm of chlorine, will produce a noticeable taste, so that poisoning with these materials would be difficult. However, they could very readily render the water unusable because of the taste.

Alkaloids

The alkaloids and some glucosides are extremely poisonous ma-

terials. Fortunately, they are fairly, and in some instances very, expensive. Ordinarily the alkaloids are soluble only in the case of the acid salts. As a result they will be precipitated in the alkaline treatment of the water. All the alkaloids have a very bitter taste in water, but this cannot be relied upon as a means of detection as many are toxic in concentrations lower than the taste level. Some are soluble in alkaline water—colchicine and nicotine for example—and are toxic at 1 ppm. Of all the alkaloids, nicotine—"Black Leaf 40"—and strychnine are most easily available. Strychnine, fortunately, is insoluble in alkaline water, and small doses are readily excreted. Lethal doses would be difficult to obtain. Some glucosides are toxic. Digitalis, for example, may be toxic in 10 ppm.

Fluorides

There is one group of inorganic compounds which I have not included in the above, the fluorides. These are protoplasmic poisons and are readily available inasmuch as they are used in the control of rats and cockroaches. The lethal dosage is fairly high. A concentration of 0.3 ppm produces no effect, but the bones and teeth are affected by concentrations of 2 to 7.2 ppm.

War Gases

It is usually thought that new and deadly chemical agents may be prepared at will. This is not the case. Of over 3,000 substances investigated to determine their value as war gases, only 38 were actually used, and of these only 10 or 12 were of any value.

As a protection against these war gases, chemical treatment is largely ineffective. Many of them are liquid—insoluble in water—so that the normal operation of a filtration plant plays a most important part. After separation of the toxic liquids and solids, the water usually will purify itself in a short time by hydrolysis of the remaining material. Mustard gas, for example, may be removed by boiling the water for 15 minutes, or by storage for eight or nine days at 12° cc. Chlorine destroys the gas in a few hours. Chlorpicrin, however, does not hydrolyze or respond to chemical treatment, and the only effective treatment is to empty the reservoirs.

In general, when dealing with water contaminated by war gases, the best treatment is filtration, chlorination, or allowing to stand so that hydrolysis may take place.

Testing

It is not practical to outline a general testing procedure, but the following suggestions may be offered: (1) check as to usual requirements of potability (colorless, limpid, odorless, agreeable taste); (2) observe the reaction of a sheet of copper immersed in water (for heavy metals above copper in the electromotive series); (3) check the reaction of KI in presence of H_2SO_4, (cyanide). Tests for other heavy metals may be made by evaporating 100 cc water to dryness and examining spectroscopically.

High or low pH or alkalinity may indicate the addition of acid or alkali or the hydrolysis of war gases. Variation of the salt content such as chloride; sulfate, nitrate, etc., might indicate the addition of these salts of the heavy metals. Changes in the chlorine demand might indicate the presence of organic poisons. High oxygen consumption might mean increased amounts of organic compounds. Hence the proper scrutinizing of abnormal routine analyses is important.

In conclusion it seems to me that while the chemical poisoning of water is a possibility, the probability of its happening is remote. One would find it a rather difficult act to carry out. It seems that all we can do is to watch our water analyses carefully and critically, physically protect the water supply as far as possible, and have our physicians keep a careful lookout for the first signs of an outbreak of chemical poisoning.

—From an address delivered on Jan. 28 at a one-day Symposium on Wartime Protection of Public Water Supplies, Raleigh, N. C.

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Waiving Collections of Penalties on Delinquent Taxes

Two Moratorium Periods Analyzed by the Schenectady Bureau of Municipal Research

ANALYSIS of the collection of delinquent taxes and special assessments, made by the Schenectady (N. Y.) Bureau of Municipal Research, reveals that neither of the principal objectives which the city hoped to gain by waiving penalties was achieved. The collections during the two separate periods a year apart were not sufficiently great in either case to produce a notable change in the current cash position of the city, and the betterment was only temporary. There were very few instances in which delinquent accounts were paid on properties which otherwise would have been abandoned.

Both the moratoriums were provided in the belief that the then existing employment conditions in the community were such that owners of tax delinquent property not only were in better financial position to clear their properties, but also had sufficient confidence of continued employment to make payment. At the time of the 1939 moratorium, average weekly factory payrolls in Schenectady were higher than at any time since 1931 with the exception of the period of the 1937 upswing of business.

In the analysis of the moratorium periods — Report No. 78 — the Bureau states:

"Waiving penalties actually resulted in financial loss to the city. The total of the principal amounts collected, which were deemed of even doubtful collectibility, was less than the penalties waived on those accounts which were definitely collectible.

"On the basis of the facts presented, past experience does not indicate that the city will derive any appreciable benefit from repetition. On the contrary, experience indicates that the city will actually collect more in the aggregate by strict adherence to the penalty schedules and vigorous prosecution of delinquencies.

"The facts suggest that a pronouncement by the City Council to the effect that further leniency appears contrary to the public interest, followed by extended activity by the city to foreclose delinquent property, will provide more revenue and a greater reduction of delinquency than another moratorium period."

A Small Town Determined Not To Become a Ghost Town

Why the Elma Survey Is Attracting Wide Attention

By Benjamin H. Kizer
Chairman, Washington State Planning Council, Spokane, Wash.

IN 1929 Robert S. and Helen Lynd published "Middletown: A Study in Contemporary American Culture," followed eight years later by their "Middletown in Transition." These volumes attracted wide attention, not because their readers were interested in the small Ohio city thus subjected to the scrutiny of the Lynds, but because they were so revealing of the life-patterns of many hundreds of American cities of which "Middletown" is a typical representative.

Similarly, "The Elma Survey" is attracting attention, not because its readers are interested in Elma, but because the predicament of Elma is that of many hundreds of other American towns and cities whose citizens are groping for a way out.

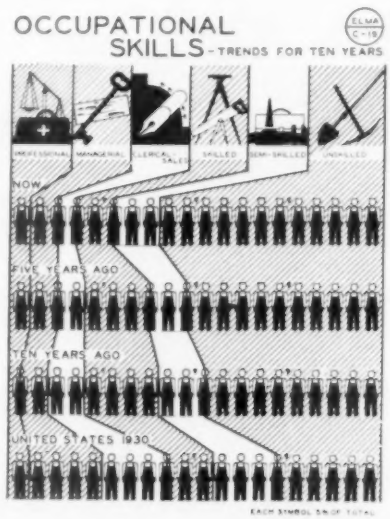
A group of Elma's businessmen became aroused to the fact that the timber that had been the mainstay of Elma's economic life was rapidly disappearing. Perhaps — dreadful thought — this pretty, homelike community, situated some 25 miles inland from the Pacific Coast in the State of Washington, might some day become a "ghost town," as have many others in all parts of our country, because its economic justification had disappeared. These men began to cast about for help. They heard that their State Planning Council might be able to aid them to find some new industry to support the community.

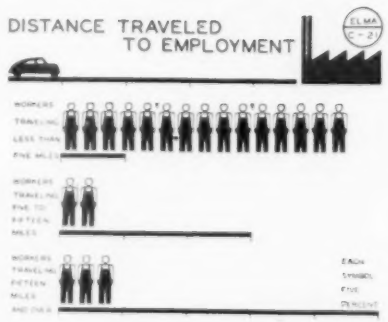
Searching Questions Asked

Accordingly, the group told the story of Elma at the next meeting of the Council. But the Council had no new industries at its command. However, it took a little time out to study Elma, and then it asked the group some searching questions. Elma must live by the service it could furnish to the trade territory of which it was the center. Had its citizens ever studied the needs, the natural resources, the economy, the way of life of that trade territory? Had Elma ever sought to find the best uses that could be made of the soil, the forests, the minerals, the streams and lakes, the fish and game in its region?

Perhaps not, they replied. However, they had an active Chamber of Commerce that had publicized Elma's strong points as best it could. But the busy outside world hadn't paused to listen. What more could be done?

Perhaps, the Council suggested, a thorough-going study of this trade territory might reveal that the people of Elma and its supporting territory had assets not developed or not used to good advantage, liabilities that should be liquidated. A merchant would inventory his stock of goods at intervals to find out just where he stood. What Elma seemed most to need was to know itself, its economic and social resources. It should lay aside all booster talk, all defeatist fears, search out the good news and the bad news about itself with thorough impartiality. Then, with full knowledge, it could plan its future on a secure foundation.





Could the Council make such a study for Elma? In part, yes. It could furnish a director of the survey. Because it is a coordinating agency, probably it could secure a good deal of aid from the technicians and scientists of federal, state, and county agencies. But the bulk of the field work would have to be done by the people of the area. Were they willing to carry their part of the load?

These men were aroused. They were in earnest. They pledged the active service of their community. The survey was undertaken.

The first step was to survey the extent of Elma's trade territory, which was found to be approximately 250 square miles, with a population of 6,500, or about 1,600 families. This furnished the field of the study.

An Inquiry That Was Different

With financial aid from the Northwest Regional Council, the University of Washington furnished a graduate student who made a study of family income and outgo of the residents of the region. This resulted in quite an elaborate questionnaire, with searching questions that the average independent American citizen is expected to resent. But this inquiry was different. Civic pride was aroused by the survey. Led by the local newspaper and the Chamber of Commerce, it was made plain to all that this was Elma's survey. The people were making it for their own purposes. The students of the high school under the direction of their teachers distributed the questionnaires, explained them to those needing help, and gathered them in as they were answered. To the great surprise of the Council, nearly 80 per cent of the families of the region answered fully the questions, and everyone seemed alive to the importance of helping in the survey.

The community spirit thus aroused, the county agricultural agent, who in the past had found the people indifferent to his proffered services, responded to an appeal by the Council and tested the dairy-herds for disease and productivity of butter-fat. Dairying had been a by-product, mainly of men employed in the lumber industries, and little attempt had been made to improve the herds. The results shocked the owners who, before this survey was completed, were already busy in applying the findings of the county agent. A marked increase in productivity has resulted, and it is now expected that the same number of cattle will shortly be producing double the income for their owners.

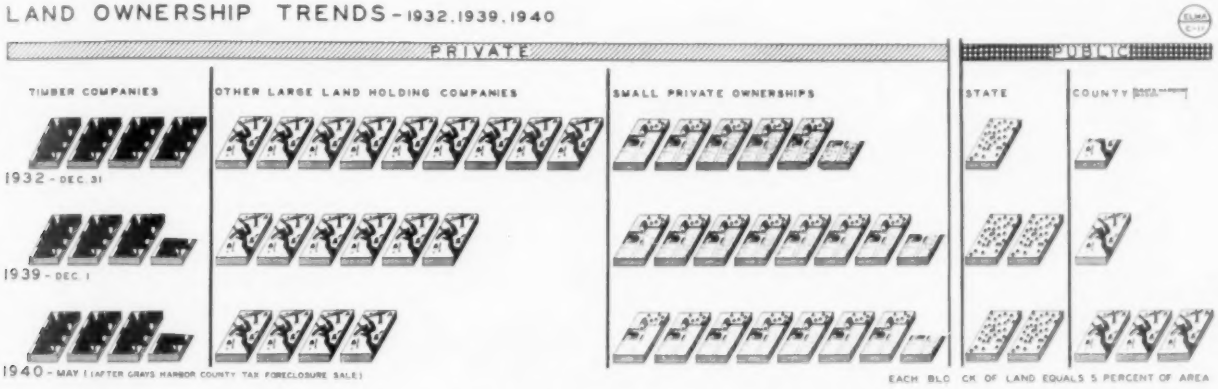
The Agricultural School of the State College furnished soil experts who have tested the soils and demonstrated that some of the poorest soil of the region is being cultivated and some of its best has been overlooked. Here, too, improvement is on its way. The U. S. Forest Service has studied the forest areas, with the idea in mind of reseeding and making better use of them, and this new information is being used. It would too much extend this review to describe the techniques of the survey and the contributions thus made by nearly forty federal, state, county, and private agencies to this inventory of Elma.

Until the last decade the characteristic community in this country was full of hustle and optimism. It was growing and expected to keep on growing. If it ever made a survey, it was of the civic-booster type that exaggerated the city's advantages and was silent as to its handicaps. Such surveys concerned themselves only with cities and their growth, their industries, and their markets. Largely, they ignored natural resources and the right use of them, upon which cities, industries, and markets must depend.

"The Whole Story—Not Just the Sweet Parts"

But here is a survey that starts at the "grass-roots." It tells the whole story, not just the sweet parts. It studies and analyzes the foundations of wealth, not their manifestations. Many past surveys have been made to encourage the baseless hopes or flatter the vanity of the men or groups of men who furnished the money for it. This Elma Survey is not put together by one or two well-paid men, more engaged in pleasing their customers than in seeing the facts, but very largely by the unpaid labor of the very community that is to use it. It is to be used as a community tool, to be continually improved and kept at work. It lays on the doorstep of the community certain concrete problems with which Elma must strive for solution. It points out that these problems can be solved and that their solution one at a time—the easiest and most pressing first—will give the community the sense of solidarity and community interest that will enable it to go on to the more difficult, gaining strength by doing.

(Continued on page 70)


LAND OWNERSHIP TRENDS - 1932, 1939, 1940
PRIVATE
PUBLIC
TIMBER COMPANIES
OTHER LARGE LAND HOLDING COMPANIES
SMALL PRIVATE OWNERSHIPS
STATE
COUNTY
1932 - DEC. 31
1939 - DEC. 1
1940 - MAY 1 (AFTER GRAYS HARBOR COUNTY TAX FORECLOSURE SALE)
EACH BLOCK OF LAND EQUALS 5 PERCENT OF AREA

Putting Sidewalk Maintenance on an Organized Basis

Winnetka, Ill., Uses Modern Methods and Equipment To Rehabilitate Its Sidewalks

By ROBERT L. ANDERSON
Superintendent of Public Works

NEARLY every city in which concrete walks were laid thirty or forty years ago finds itself possessed of many unsightly and dangerous walks which should be repaired. In Winnetka, Ill., this rehabilitation is handled by the village out of general funds, on the theory that once a property owner has paid for the original construction of street improvements, then the city should maintain them as a general obligation. The sixth year of a program to place all walks in satisfactory condition has now been finished. We hope that one more year will see completion of the initial program. Thereafter it is planned that a reduced but sustained effort will keep the system in good shape.

Salvaging Procedure

The plan that is being followed involves the combination of the mud-jack method to salvage sunken slabs, followed by replacement of slabs not amenable to raising.

The mud-jack is handled ordinarily by a crew of three men with a truck, a compressor for drilling the holes, and a trailer for mixing the mud. The mud-jack itself is the small model 10 built by the National Equipment Corporation. Depending on the condition of the walk and distance it has to be raised, this crew can raise from 60 to 175 lineal feet of 5-foot walk per day. The jacking holes are cemented to give a finished job of satisfactory appearance and permanence.

The replacement crew consists of eight men, two breaking out and forming, with five hauling material, mixing, and finishing. Equipment consists of a Jaeger 3½ S tilting mixer, a 2-ton truck for material, a ¾-ton stake-body truck for forms, and a ½-ton pickup truck for finishers and utility. They are able to average around 110 feet of 4-inch single course slab per day. No cost for hauling of broken walk is included, as we have arranged for private paving contractors to remove it without cost for salvage.

Both the outfits mentioned above are assembled with the idea of portability uppermost, since it should be remembered that a day's work may stretch over a distance of several blocks, in lengths of only ten or fifteen feet.

Sidewalks that cannot be raised easily are replaced with an efficient mobile crew

The cost of the entire program per mile of walk covered will of course vary widely with its condition. We find, however, that we are running between $400 and $800 per mile for walk in average condition, with costs double or more for poorer sections. The labor scale for cost figures in the above tabulation is 70 to 75 cents per hour. Equipment costs include all expenses except depreciation.

Cost of mud-jacking for the past six years has varied between 17 and 33 cents per lineal foot depending somewhat on the total lineal feet raised. The poorer walk in the older sections of town also influenced the cost of mud-jacking.

Replacement costs for the new sidewalk has varied between a high of $1.15 to a low of $0.83 per lineal foot. About half the replacement cost has been spent on labor. Material costs represent somewhat more than 40 per cent.

A view of the mud jack and the drill used in raising sunken sidewalks

Strengthening a Water Supply in Western Nebraska

Chadron, Nebr., Constructs a Water Supply Using Both a Dam and a Pipe Gallery for Supply

By H. A. Bentzien
Water Commissioner

CHADRON, NEB., has reinforced its water supply. The long, dry periods of a few years back may come again, even more relentlessly, but if they do, our city feels that it will be ready. We may be wrong. Sometimes drouths do not show proper respect for the careful computations of an engineer, but we feel that we have done everything reasonably in our power to insure an adequate water supply.

Chadron Creek, a spring-fed stream, furnishes water for our municipality. It feeds a storage reservoir and a pipe gallery, both located eight miles south of the city. Because of the great number of cattle farms on the watershed of this stream, contamination is very high. The state park also is located here, and the overflow from a swimming pool, as well as other waste, drains into the stream.

Storage Reservoir

The storage reservoir consists of an earth dam, which holds approximately forty million gallons. Most of the water supply comes from the underground filtration gallery lying just below the dam. This underground gallery consists of a 15-inch concrete tile line, laid with open joints, to catch seepage water from the dam above. The line is about one mile in length and connects by means of a concrete box to a 14-inch wooden pipe and a recently-completed 14-inch cast-iron main three miles long, bringing the water into the filtration plant.

Partial Supply from Gallery

The gallery furnishes enough water to supply the city nine months of the year, and is of good quality. However, during the months of June, July, and August we find it necessary to supplement this supply by drawing from the reservoir. This stored water contains algae and other growths which cause a strong taste and odor in water supplied to the filtration plant. This water is also very muddy after sudden heavy summer rains. Consequently, operation of the filtration and purification plant must be very careful and thorough during this period.

The water-treating plant has a capacity of two million gallons a day, or about 25 per cent over our peak demand. As the water enters the plant it discharges into a rapid mix basin where it is treated with alum. Leaving this tank, the water enters a baffled flocculator and then goes to two rectangular sedimentation tanks, each approximately 100 feet long, 35 feet wide, and 14 feet deep, operated in series. Nuchar is added in the flume leading from the settling basins, to the final flocculator, which is also baffled. Flocculation is followed by a settling period in another basin, from which the water flows onto the filters. The water is filtered by two rapid sand filters, each 18 x 22 feet, equipped with cast-iron underdrains, 18 inches of gravel, and 30 inches of filter sand. Necessary control devices, such as rate of flow controllers, loss of head gauges, and operating valves insure proper operation of the filters.

From the filters the water flows into a 150,000-gallon clear well located beneath the filters and pipe gallery. This well in turn is connected by a 14-inch cast-iron main to the old concrete reservoir, with a capacity of 975,000 gallons. The elevation of the clear well floor is the same as the reservoir, so that a depth gauge located on operating the floor of the plant shows the level of water at all times.

A solution feed chlorinator has been installed so that chlorine may be introduced into the settling

The hillside filtration plant for the surface-water portion of the supply of Chadron, Nebr.

basins, the clear well, or both. A small electric motor driven pump, which operates continuously, furnishes a pressure of 45 pounds to supply water from clear well to chlorinator.

A 60-hp gasoline engine operates the centrifugal back wash pump, with a capacity of 5,600 gallons per minute, and draws water from the clear well, the waste water being discharged into a ditch leading away from the plant. A four-cylinder gasoline engine has been installed to pump water from the settling basins into the filters in case of emergency, so that if a break should occur in the line, this additional 600,000-gallon storage would be available.

The house tank is located on the second floor and supplies water by gravity to operate the dry feed machines and to furnish water at the sink and elsewhere about the building. This tank is filled by a ½-hp electric pump operated by an automatic float in the tank. In back of the house tank is the storage space for chemicals with an electric hoist to bring chemicals from the ground level. The plant is located on a hill one mile south of the city. Water is brought to town by a 14-inch case-iron main, where it branches into two ten-inch wood mains, feeding the east and west sides of city. The city mains range in size from 10 inches in the business district to 4 inches in the outlying residential section and all are well inter-connected. We maintain a water pressure of 60 pounds in the business district and a minimum of 45 pounds in residential district.

With a population of 4,300 people we have 1,229 service connections which are 95 per cent metered at the present time, with enough meters on hand to completely meter all services. All meters are owned by the water department and are read monthly during the six summer months after which a minimum charge of $1.00 per month is made for the winter months in residential districts. Consumers are encouraged to use all the water they wish during the fall months to water trees, lawns, and shrubs so that it will be soaked up in the ground for the next season. The meters are read every month in the business district. Customers in this area are charged a minimum of $1.00 per month.

Work on the plant was completed and operation began on August 17, 1940. Black and Veatch, of Kansas City, was the consulting engineering firm.

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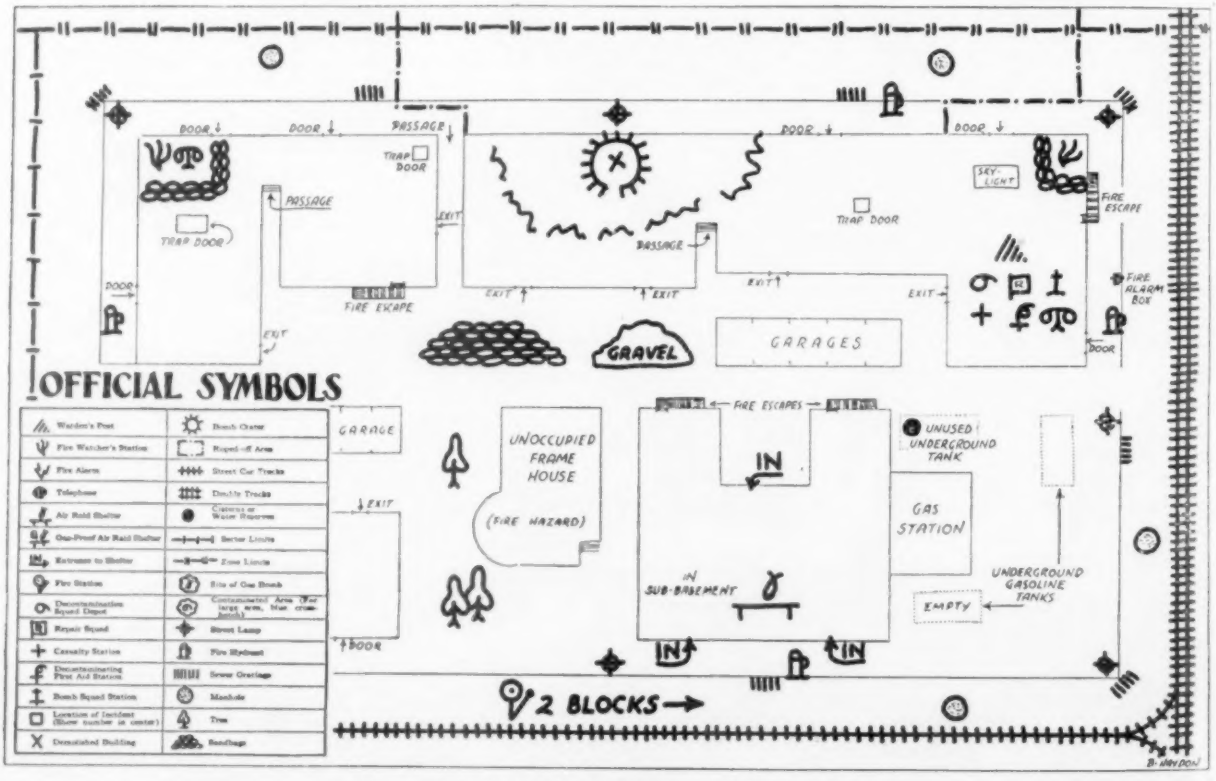
For Quick Action in Case of Bombing



MAPPING A CITY BLOCK FOR CIVILIAN DEFENSE

Quick action in case of bombing is facilitated by diagrams of city blocks such as the above, which locates all points of interest to civilian defense. Using the official mapping symbols of the Office of Civilian Defense, this map was prepared for the transcript of the University of Chicago Round Table broadcast on Civilain Defense, from which it is reproduced. The broadcast was in the form of discussion by experts on the possibilities of air raids of American cities and the problems likely to be encountered

Local Government Is News—XIV

The ICMA Reviews the Record

By PHILLIPS BRADLEY

THE International City Managers' Association has been promoting better municipal reporting for the last two decades. Dr. Clarence E. Ridley's annual appraisals have done much to stimulate more accurate—and more attractive—reports by local governments throughout the country. In the 1942 *Municipal Yearbook*, just published, he reviews the record of reports compiled and distributed in 1941. His analysis is well worth noting. It emphasizes a number of questions which city officials can well afford to take into account in preparing both annual and special reports.

Of the nearly 200 annual reports received by ICMA, Dr. Ridley culled 108, from cities ranging from less than 5,000 to over 100,000 population. The reports are made by towns and cities all the way from Maine to California, from Quebec to Oklahoma.* They reflect a wide variety of local government activity and organization. The record which Dr. Ridley appraises is, therefore, exceptionally inclusive. What are some of the high points which emerge from his analysis?

Does More Money Insure Better Reporting?

The summary table below, compiled by Dr. Ridley, reveals a number of interesting comparisons which deserve attention, especially in these days of paper priorities and rising printing costs. The last column, "publication expense," indicates that costs do not vary proportionally with the size of either population or report. The variations are explained only in part by different methods of producing the reports — printing, mimeographing, or offsetting. It is interesting to note that 21 of the 108 cities produced their reports on city-owned equipment. No comparative-cost data are available for private and public production. Except as to printed reports (only 3 of 84 cities printing their reports owned their own presses), substantial economies should result from producing the annual report by City Hall itself. Even if equipment must be purchased, it can be utilized for many other purposes, such as office memoranda, departmental forms, tax and service bills, or special reports. If a program of special reports is developed, in mimeograph or offset form, the cost of the annual report can often be reduced.

Varying costs result in part, at least, from the detail as well as the format of reports. As has been frequently noted in this column, the annual report going to the citizen should be designed to give a generalized, over-all picture of municipal activities. It need not contain much of the traditional financial and auditing data—expensive to produce as well as unintelligible to the citizen. Such itemized records may be kept on public file for reference by any interested person. Substantial economies can be achieved by those responsible for preparing annual reports by further "streamlining" of fiscal data. Details irrelevant to the citizen who wants to know the final results, not the day-to-day record, of his local government operations may well be omitted. There will inevitably be a saving in dollars as well as an increment in civic interest.

Tardiness No Virtue

The table indicates another factor which should not be ignored in preparing the annual report—its up-to-dateness. Why should a report not be issued within a month after the end of the reporting period? Is there generally any really valid reason for a lapse of a quarter to half a year—or more? Will civic interest be stimulated by reading an old story, perhaps no longer an accurate record of municipal activity and achievement?

One large city, Dayton, Ohio, managed to have its report ready on the dot. The next city in this group was 17 weeks late; others ranged up to 39 weeks. In the smaller cities, there were too often similarly long delays in publishing the record of the year's business. One town of less than 5,000 population took 35 weeks to get out its report. The up-to-dateness of the annual report is one of the most important factors in its value as a stimulant to civic interest. No city or town, small or large, is incapable of making its report timely enough to be of current news value. No City Hall should work on a reporting schedule which results in presenting its citizens merely with an archeological record.

Who Should Receive the Report?

The table brings out another interesting comparison among the 108 cities —the ratio of the number of reports produced to the population. As might be expected, the smaller communities "cover" their citizens more adequately; the larger the city, the fewer are the reports available for per capita distribution. The problem of distribution is, of course, a real one in the larger cities. To print reports at the ratio of the smaller communities is neither feasible nor necessary. The important question is to insure distribution to those who will make effective use of the report.

Direct mailing, distribution from house to house by city employees on their regular rounds, and issuance on request at city offices are the most usual methods. Several other devices are frequently used to get the report into the hands of interested citizens. Among these are distribution to libraries, public and private educational institutions, and other agencies which may use them for reference purposes. Some cities send one or more copies to business houses and professional offices where they may be read by customers and clients.

Many other useful hints are suggested by Dr. Ridley. He points, for instance, to the steadily rising use of summaries of large annual reports, of leaflets on special problems or activities, of "civic news" items attached to tax bills. News about the whys and hows of local government, broadcast as widely as possible to the people, is today a major factor in citizen response to progressive policy and efficient administration at City Hall. Well—and honestly—presented, it is the grist of good goverment.

SUMMARY OF DATA ABOUT ANNUAL MUNICIPAL REPORTS OF 109 CITIES: 1941

Population Group	No. of Cities	Population per Copy Printed		Number of Pages		No. Weeks, End of Period Covered to First Distribution		Publication Expense	
		Range	Median	Range	Median	Range	Median	Range	Median
Over 100,000	12	14–3009	79	32–159	88	0–39	26	$375–$2,400	$1,450
50,000 to 100,000	8	7–212	48	32–179	59	13–39	22	500–2,320	746
25,000 to 50,000	15	3–451	39	4–107	37	4–30	13	15–1,472	259
10,000 to 25,000	30	3–259	28	14–256	44	1–35	13	5–1,600	208
5,000 to 10,000	22	2–170	5	15–251	44	1–26	9	20–689	334
Under 5,000	21	1–65	3	9–124	39	1–35	4	8–400	188
All Cities	108	1–3009	16	4–256	47	0–39	13	$ 5–$2,400	$334

* Of the 108 reports, 5 come from Massachusetts and 8 from Vermont. See article in THE AMERICAN CITY, April, 1942, page 66.

Street-Car Rails Come Out at a Profit

Wausau, Wisc., Makes Efficient Use of Both Equipment and Materials in Removing Three Miles of Rails

WHAT to do with those old street-car tracks—those relics of a score of years ago, souvenirs of a jostling ride, hanging doggedly to a leather strap! How many street commissioners, city engineers, mayors, and safety commissioners have scratched their heads as they watched motorists navigate desperately across these slippery rows of steel. That these tracks should come out is a foregone conclusion, but how to do it on a slender street maintenance budget is another problem.

Now that the war effort has intensified the search for all available scrap iron and steel, it becomes more and more necessary for municipal officials to look at those rails closely. Many cities have been intensifying efforts to remove the rails and, generally speaking, they have found that this program has not been strictly profitable. There have been many reasons for this: the rails have been firmly imbedded and hard to remove; the proper equipment has not been available; and many times the price of scrap iron has prevented operations from being successful regardless of the construction procedure.

Wausau, Wisc., however, has had a happier experience. By making careful and practical use of the equipment they already owner, they have been able to remove approximately three miles of these rails at a cost low enough that their sale as scrap actually produced a profit.

Using Modern Equipment

In removing the rails, Wausau officials made full utilization of their city-owned mechanical equipment. They used an Austin Grader equipped with a heavy scarifying tooth to remove the brick from between the rails. This machine, so equipped, was able to remove the rails easily by making three passes parallel to the direction of the tracks. After laborers had removed the loosened brick, they unspiked the rails from the ties and used the same machine to tear the rails loose from the roadbed. These operations are illustrated in the accompanying photographs.

About half the brick was damaged in this work and was sent to the city asphalt plant for crushing. The remainder was stored for future use in sewer construction, street work, and other similar places. In that way, the municipality realized the utmost in value from brick that many city officials now simply throw away. The efficient use of this material is another reason for the profit that Wausau has been able to realize in this improvement.

The street department used an asphalt mix to repair the gap left in the paving and thriftily used the crushed brick as aggregate for this mix. The department is very proud of its asphalt plant where this mix was prepared. It is automatic, with gravity-feed bins, and makes highly efficient use of the labor involved. By carefully developing the operation of the plant, they have been able to raise production from a figure of 100 yards per day to approximately 400, with costs of the material as low as $3.50 per cubic yard delivered to the road.

The city maintains a careful accounting system covering these operations and, accordingly, feels able to quote authoritatively on the expense of this street improvement. The operations show a total cost of $4,531 for the removal of the brick and rails and replacing of the roadbed with asphalt material. The rails were sold for scrap at a price of $6,300. An estimated 100,000 bricks were broken in the process of removal and were reused in the asphalt surface production. Another 100,000 were salvaged and are in storage for future use. At two cents a brick, city officials point out, this stockpile of reserve material has a cash value of at least $2,000. This would make an estimated gross income of $8,300 for the project, or an actual saving of nearly $3,800.

Eliminated Hazards

"We feel that we have every reason to be proud of this work," Walter Kluever, Street Commissioner said recently. "We gave the equipment rough service, but it stood up very well. As a result we have been able to eliminate the hazards these rails have presented and to give our city full serviceable Streets. We feel fortunate in being able to perform successfully this salvage operation at a time when scrap iron seems so necessary to our national war effort."

A view of the grader equipped with a single scarifying tooth

The grader tears loose the paving brick between the rails

Showing how the same equipment loosens the rails from the road bed

Neighborhood Civilian Fire Departments

By RALPH HANES
Chairman Fire Reserve Committee
Leonia, N. J.

PHOTOGRAPH BY W. E. BAUR

One of Leonia's snappy trailers carrying hose, Indian fire pump, fog nozzles, bulletproof helmets, and tools

LEONIA has well-trained and well-equipped neighborhood fire-fighting teams forming a pattern which may be of use to the many auxiliary fire-fighting units now at various stages of development throughout the nation.

It is a community of 1½ square miles harboring 5,763 people. To an aviator, zooming at military speed westward across the Hudson River directly above the George Washington Bridge, Leonia would appear as one of a postage-stamp strip of communities stretching for miles along the top and western slope of the ridge that lies between the river and the meadows. To him Leonia would mean not more than 15 seconds ride beyond the New Jersey Plaza of the bridge and directly in line with the bridge itself.

That's one reason why Leonia's Civil Defense Council went into action shortly after December 7, 1941, and soon was far ahead of the field of American municipalities in providing protection against a multiplicity of simultaneous fires.

Action was in three directions. Following a recommendation offered by Fire Marshal Sid Davis, the Borough Engineer, Clyde Pratt, was authorized by the Council to purchase eight half-ton trailers and a well-planned complement of auxiliary fire-fighting equipment for each. Joseph Galland, Fire Commissioner at the time and recently shifted by Mayor Harry Platt to the Chairmanship of the Police Commission, appointed a committee of three men of the borough to organize an adequate group of fire reserves. The third move was to arrange with Chief Charles Schanzenbach, of the regular volunteer fire department of the borough, to map out a course of instruction for the reserves in the fundamentals of fire fighting with the new equipment which had begun to arrive.

The trailers, made by the Ben-Hur Mfg. Co., Milwaukee, have welded steel bodies and pneumatic tires. One man can push a trailer behind a car and fasten it to the rear bumper. The trailers were painted red and equipped with 1½-inch Eureka fire hose. While most of the hose is single-jacket construction, some double-jacket hose was ordered for possible service later on the regular fire-department vehicles. An adapter to permit reduction from the standard 2½-inch fireplug outlet to the 1½-inch hose is provided for each trailer unit. At first, each trailer was allotted 500 feet of hose. Later it was found necessary to add 50 feet to one and 100 feet to another to assure adequate line to houses in certain locations.

Nozzles are the Elkhart Manufacturing Co.'s "Mystery" type that can be varied quickly from complete shut-off to solid stream, thence through various degrees of conical fog to water curtain. The stream is for fighting fires set by incendiary bombs; the fog for direct action on the bombs.

Each trailer carries the hose plus hose spanner, hydrant wrench, 16-foot ladder in 8-foot sections, six flashlights, axe, pike pole, New York-type bar for forcible entry, first aid kit, red lantern, 12 bulletproof steel helmets made by Cairns Bros., three buckets of sand, long-handled shovel, Indian fire pump.

The sand, shovel, and Indian fire pump may be especially useful in the event of inadequate water pressure. The cost of each trailer, fully equipped, was approximately $475.

Man Power

The fire reserves of this war-conscious borough number 120 townsmen, from 17-year-old high-school seniors and their principal to clerks, accountants, lawyers, ministers, professors, mechanics, and engineers. They are divided into eight sector groups, each truly a neighborhood

Reserves learning from experienced firemen how to couple hose quickly; adapters are used to connect 1½-inch hose to 2½-inch hydrant outlet

fire-protection team, each with a leader and associate leader. Chief Schanzenbach has assigned a member of the fire department to advise each team. The Committee consists of Clark Drummond, Paul Williams, and the author, who serve with their neighborhood teams.

In addition to Sunday full-force meetings, each team has been holding independent weekly drills with its own trailer and equipment. These drills will continue throughout the summer.

In the event of an alert, the team gathers at its garage, hooks the trailer to the first car to arrive, and the leader stations himself at the telephone ready to receive instructions from Fire Commissioner Frank Bogert in control headquarters.

Five C. of C. Schools This Year

Five schools with improved, up-to-date courses are available to chamber of commerce executives this year. The News Letter of the Chamber of Commerce of the United States points out that:

"New problems and additional duties, with correspondingly greater responsibilities, are facing chamber secretaries as the result of the war. Never before has it been as necessary to know what is going on outside the home town, to keep in touch with what other chambers are doing, and to maintain close state and national contacts. Courses at the schools for commercial and trade organization executives are designed to help them meet the current situation."

The five schools are to be held during May in Ocala, Fla.; during July in Dallas, Texas, and Missoula, Mont.; and during August in San Bernardino, Calif., and Evanston, Ill. They are listed in the Convention Calendar on page 103 of this issue, together with the names and addresses of those to whom one should write for information.

M.I.T. Offers Summer and Four-Year Courses in City and Regional Planning

A SHORT summer course in city and regional planning will be held at the Massachusetts Institute of Technology during the three weeks beginning Monday, July 13. The program, sponsored jointly by the Institute and the American Society of Planning Officials, is arranged to meet the need for an intensive course covering both the administrative and technical aspects of city and regional planning.

The program will be divided into four sections as follows: *City and Regional Planning;* given each morning from July 13 to July 24; *Planning Legislation,* given each afternoon from July 13 to July 17; *Planning Administration,* given each afternoon from July 20 to July 24; and *Techniques of Planning,* given each morning from July 27 to July 31. Each section will consist of a series of lectures and discussions arranged in such a way that those wishing to participate may register in one or more without loss of continuity. The seminars will cover such subjects as zoning, subdivision control, traffic problems, basic data surveys, master plans for communities and regions, housing, the powers and duties of planning and zoning agencies. Opportunities will be provided for the study of design or research problems under supervision.

The fee for the entire program is $55; for the section on City and Regional Planning, if taken separately, $25; and for the other three sections $10 each, plus a $5 registration fee.

Undergraduate and Graduate Courses

INAUGURATION of a four-year undergraduate curriculum leading to the degree of Bachelor in City Planning will be available at M.I.T. in September, 1942.

Seven years ago Technology made available to properly qualified students a graduate program leading to the degree of Master in City Planning, which is open to men and women holding a bachelor's degree in architecture, landscape architecture, civil engineering, geography, political science, economics, or a related field. Both the undergraduate and graduate programs have been developed in response to the increasing demand for men who combine a broad educational background with a sound training in the techniques of comprehensive planning. Not only are such men needed urgently now to serve in technical or administrative positions on the staffs of local planning commissions, housing authorities, state planning boards, and federal planning and housing agencies, but it is believed that an extensive program of training for planning work must be embarked upon if a sufficient supply of technical personnel is to be available at a later date to meet the demands of the post-war reconstruction period.

For full information regarding any of these courses, application should be made to Professor Frederick J. Adams, M.I.T., Cambridge, Mass.

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State and Municipal Expenditures in Wartime

URGING that spending and taxing powers be so directed as to aid both in the winning of the war and in the planning for post-war redevelopment, the Council of State Governments, through its Board of Managers, is suggesting to state and local governments:

1. That in adjusting their own services and programs, these governments give priority to activities which will best promote defense work within their territories.

2. That these governments postpone non-defense public works and adjust their other services in order to release the utmost manpower and materials for the defense effort.

3. That these governments contribute further to the conservation of manpower and materials by maintaining essential public facilities and improvements in good condition, by simplifying specifications, perfecting purchasing procedures, and developing cooperative buying arrangements, and by making other improvements in administrative organization and methods.

4. That these governments begin now to prepare programs and plans for useful public works, to the end that the consummation of such works may help in the process of readjusting the economy to peacetime pursuits. This planning now will avoid wasteful make-work projects later.

5. That these governments begin now to prepare for the critical fiscal demands of the post-defense readjustment by applying all available revenue to the retirement of debt or accumulation of reserves if such excess revenue can be applied to debt retirement or accumulated reserves adequately protected against invasion.

6. That these governments seek, by all measures compatible with the objectives of the defense program, to safeguard and preserve their own essential activities in order that the state and local governments may continue in their vital role as basic service institutions in a free democracy. This is imperative for public morale and effective economic functioning in this period of defense; it may be even more important in the return to peace.

Machine Tax Accounting Saves Money, Time, Staff

By MARION FREY
Clerk of Board of Assessors
Dunkirk, N. Y.

IN Dunkirk, N. Y., there are three tax-billing periods: one each for city, for school, and for state, county, and town. The city collects school and state, county and town taxes, for which it receives a one per cent collection fee. In each of the above billings, the tax bill, property ledger card, and the tax roll are prepared simultaneously on our Underwood Sundstrand automatic tax-computing and accounting machine purchased in July, 1941, and in use since October 1 of that year. An Addressograph is used for entering property description, owner's name and address and assessment valuation on the tax roll, tax bill, and property ledger card.

The accounting-machine operator sets up on the keyboard the assessed valuation imprinted on the bill, depresses the motor bar, and the rest of the operation is entirely automatic, since the tax rate is permanently fixed for that tax period in the mechanism of the Sundstrand municipal accounting machine. The machine computes the tax, reprints on the bill the valuation, prints the current tax, the one per cent collection fee, and a total of both. Two multiplications occur simultaneously — the computations of current tax and one per cent collection fee. In any tax computation where the amount of the tax is one mill or more, the amount taxed is carried to the next full cent, the machine automatically performing this operation. On the city tax there is no one per cent collection fee, and the machine merely skips this column.

The tax bill is a four-part carbon inter-leaved form. Parts 1 and 2 are sent to the taxpayer who returns both copies when making his tax payment. The original is receipted and returned to him, becoming his permanent receipt. Part 2 is the treasurer's record of payment. Parts 3 and 4 are placed in the treasurer's file at the time of the billing. When a payment becomes delinquent, Part 3 serving as a legal ten-day notice, is sent to the taxpayer, and Part 4 remains in the treasurer's file as a record of unpaid taxes. As taxes are paid these copies are destroyed.

The property ledger card carries a record of all the information going on the tax bill, and shows a balance by years and the total balance. The total-balance column shows a total of all taxes owed on that property. This card also records all tax payments as well as fee and interest payments. At the completion of the tax-billing period, the machine is moved to the treasurer's office for the recording of tax receipts. This is made possible by the interchangeable control plates on the accounting machine, which permit the use of the machine for as many operations as we have, with a control plate for each. As taxes are received, deposits are made daily, and payment postings are made to a Cash Receipts Journal and the property ledger card.

A machine posting operation on this phase of our work, in particular, provides a control over accuracy that was impossible when cash was posted by hand into bound books. The following factors are proven by the Sundstrand machine with each cash posting:

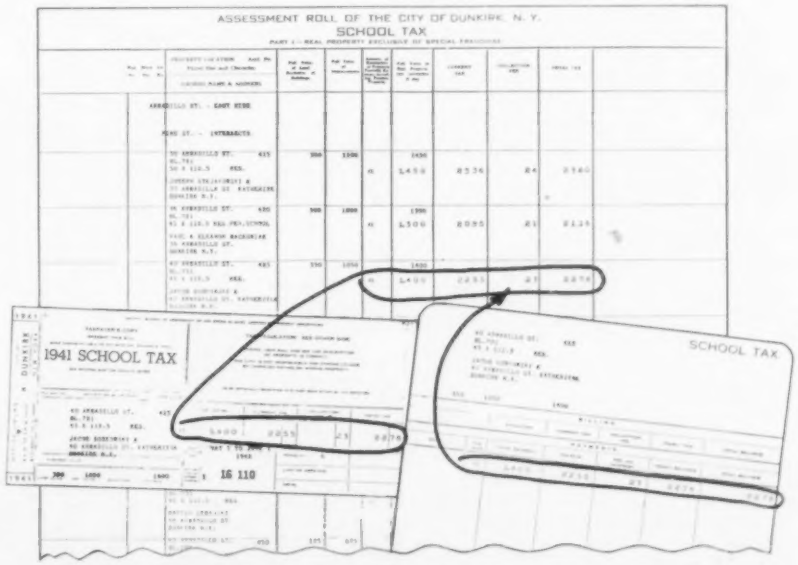
1. Correctness of transcript from tax receipt
2. Correctness of computation of tax receipt
3. Correctness of old balance pickups
4. Correct account has been posted

Also, as a by-product of this ledger-posting operation, the Sundstrand machine automatically computes and prints the New Yearly Balance and New Total Balance.

At the end of a given run of posting, it is proven that all cash receipts and the correct amounts were posted.

At the completion of the "grace period" for tax payments, a Trial Balance of Delinquent Taxes is prepared from those property ledger cards which show an outstanding balance.

Formerly the tax roll was hand-copied from our assessment record and the tax spread on this roll. The bill was then hand-copied from the tax roll. The accounting machine enables us to do all this work without any additional help and with a pleasing simplicity of operation. A particular advantage is the property ledger card showing all taxes outstanding on any piece of property. Formerly it was necessary for us to examine numerous rolls to ascertain whether or not there were any delinquent taxes.



Tax roll, individual ledger card, and bill, all written in one machine operation

How Small Towns Can Help Win the War

Community Guide Book Offers Practical Suggestions

A TWO-PART "Small Town Manual," suggesting in Part I *How you can win the war at home*, and in Part II *How you can improve business in your town*, was issued last month by the Bureau of Foreign and Domestic Commerce. A foreword by Carroll L. Wilson, Director of the Bureau, explains that:

"This manual is not planned for suburban towns or highly industrialized communities. Though both will find much that is helpful in it, it has been designed for the backbone of America, the small communities with their surrounding territories scattered from Portland, Maine, to San Diego; from Portland, Oregon, to Key West. It shows you how to increase your town's assets; how to liquidate its liabilities. Through your own efforts."

Community Organization and Action

Part I offers practical suggestions for adapting national plans to the possibilities of the small town, not only in helping to win the war but in aiding the local community to weather the storm of war and to be stronger to march down the paths of peace.

Pointing out that this war cannot be won by Washington alone, but that action for production and conservation is needed in every community and on every farm, the Manual suggests that

"The first step is for you to call a meeting of town and farm leaders. . . . Among the groups which you should include in the first meeting are members of: the local Agriculture War Board, the American Legion, the Civilian Defense Council, the Grange, the Farm Bureau, Future Farmers of America, 4-H Clubs, the newspaper editor, the Chamber of Commerce, the Junior Chamber of Commerce, the banks, town officials, local representatives of the AAA, the REA, the WPA, Service Clubs, FSA, Farm Credit Administration, churches, labor unions, school teachers, PTA, general businessmen, fraternal organizations, women's clubs, farm women, the county agricultural agent, non-union labor, plain dirt farmers and others. . . .

"You cannot overemphasize the importance of working with existing organizations and authorities wherever possible. You may have to build a fire under some groups that haven't been very active and spur them into action, but you'll avoid a lot of jealousy and bickering by using groups and authorities which are already set up. Moreover, they may have already formulated plans and ideas which can be used to good advantage, but about which they haven't yet done anything.

"Make sure your coordinating committee is made up of live wires who will keep after people, follow up assignments, and see that things get done."

Self-Help Is the Key

Probably the need of keeping your town functioning as efficiently as possible during the war will make it easier to get people to work together for your town. Certainly, the more you and your town work out your own salvation, without appealing to the Federal Government for help, the more you will contribute to the winning of the war. The more your town travels on its own steam, the more national steam is left for the war effort.

Problems to Be Tackled

Discussing problems to be tackled, the Manual devotes one or more paragraphs to practical suggestions under each of the sub-heads in the following list:

1. **Farm Labor Shortage**
   - Survey of farm labor requirements
   - Plan now for school help
   - Enlist volunteer townsmen
   - Enlist volunteer housewives
   - Training city boys for farm work
   - Factory lay-off plan
   - Sunday workers
   - Help from pensioners, WPA, etc.
2. **Town Labor Shortage**
   - Pooling retail relief help
   - Survey unused skills
   - Training skilled labor
   - Releasing men for more vital work
3. **Transportation Difficulties**
   - Using school buses more fully
   - Pooling private cars
   - Fewer deliveries
   - Cooperative deliveries
   - Publicity against unnecessary driving
4. **Salvage and Scrap**
   - Farm scrap drive
   - Town scrap drive
   - Unusual sources of scrap
   - Parts bank
   - Mason jar collection
5. **The Home Battlefront**
   - Saving fats and grease
   - Training home-workers
   - Study nutrition
   - Victory gardens
   - Sugar bank
   - Cold storage lockers
   - Labor saving devices
   - Red Cross blood bank
   - Red Cross volunteers
   - Civilian defense
   - Sewing bees
   - Wool scraps and rags
6. **Shortage of Machines, Equipment, Seed, Etc.**
   - Farm equipment inventory
   - Inventory idle city equipment
   - Swapping surpluses
   - Consolidating inventories
   - Meeting shortages in advance
   - Ordering in advance
   - Seed for next year
7. **Increasing Production of Food and Materials**
   - Beating the sugar shortage
   - Raising vital crops
   - Increased industrial production
8. **Idle Machines, Plants, Equipment**
   - Pool, subcontracts
   - Conversion
9. **Migration of Labor from Your Town**
   - Keeping your laborers at home
10. **Bond Sales and Other Patriotic Drives**
    - Bond sale contest with other areas
    - Special events
    - War production contest
11. **Housing**
    - Caring for refugees
    - Housing workers
12. **Helping Each Other Over War Hardships**
    - Swapping experience
    - Helping special cases
    - Cutting expenses

To Improve the Town's Business

The second section of this Small Town Manual is devoted largely to simple practical suggestions for making a nonstatistical analysis to aid in promoting agriculture, retail trade, new industries, service establishments, tourist attractions, education, and social activities. Guides making simple statistical studies of the community and forms for analyzing the religious, recreational, and tax problems as they bear on the business life of the town are also included.*

Methods of using the completed survey are suggested in the Manual.

This excellent Small Town Manual was prepared under the direction of Raymond Reeves, with the assistance of many other members of the Bureau of Foreign and Domestic Commerce. THE AMERICAN CITY *urges its readers in non-suburban towns and villages to write to the U. S. Department of Commerce, Washington, D. C., for a free copy.*

* The type of survey recommended is similar in many respects to that recently conducted in Elma, Wash., as described and illustrated on pages 48 and 49 of this issue of THE AMERICAN CITY.

Dynamic Exhibition of Wartime Housing Opened

National Housing Administrator Outlines Government War Housing Policy

VISITORS to New York between now and July 19 will have an opportunity to see at the Museum of Modern Art, 11 West 53d Street, a remarkable exhibition of Wartime Housing. Arranged in collaboration with the National Committee on the Housing Emergency, the exhibition shows by means of graphic and dramatic installation why adequate housing designed by the country's best architects is necessary to help America win the war. It presents various new methods for producing such housing with maximum speed and economy according to contemporary design.

At a preview on April 21, the guest of honor was John B. Blandford, Jr., who made this the occasion of his first public address since taking office as Administrator of the National Housing Agency. Brief talks were made also by John Hay Whitney, President of the Museum, and Mrs. Samuel I. Rosenman, Chairman of the National Committee on the Housing Emergency.

Eliot F. Noyes, Director of the Museum's Department of Industrial Design, assembled the material and designed the installation with the help of Alice Carson of the same Department, and Don Hatch, New York architect, retained by the Museum as special consultant for the exhibition.

Scope of the Exhibition

The exhibit has a twofold purpose:

1. To show that war materials can be produced in sufficient volume to assure victory only if workers are available to man the plants. Workers must have living quarters; therefore housing is essential to the war production program.

2. To show that housing is not a one-man job but that it requires careful planning by many people to insure a good future for the whole community. Only in this way can we be sure that the wartime housing will not become slums or ghost towns after the war.

The exhibition tells its story in a series of scenes presented by movie shorts, blown-up photographs, and architectural models. In addition to this visual presentation each scene is accompanied by voices which dramatize the idea of the exhibition scene by scene.

As the visitor goes into the exhibition, a crowd of war workers, in movie projection against the wall, perform their jobs before him. They travel along with the visitor, in movie or voice projection, as he passes from scene to scene of factory production, migration of workers, housing conditions in overcrowded areas, makeshift homes, sleeping in basements, tents, shacks, waiting rooms, and automobiles.

The theme of the first half of the exhibition is given in Benjamin Franklin's verse:

For want of a nail the shoe was lost.
For want of a shoe the horse was lost.
For want of a horse the rider was lost.
For want of a rider the battle was lost.
For want of a battle the kingdom was lost.
And all for the want of a horseshoe nail.

or, in modern language:

Machine Needs Man
Man Needs House

And the three together spell production which will win the war. Without any one of these three essential elements, production is bound to lag and the war may be lost.

The scene brightens in sequences showing new housing going up quickly by mass production methods, with schools, churches, stores, and other community services being fitted into the community picture. But the story does not end with war. The second half of the exhibition shows how, by intelligent community planning, wartime housing facilities can be converted to peacetime use instead of leaving slums and the empty industrial ghost towns of the last war. The visitor comes out into a final gallery which acts as a clinic to show the individual citizen and citizen groups what every American can do to bring about wartime housing that will be a big factor in victory and contribute to a happy peace.

The exhibit, after its three months in New York, may be made available for showing in other cities.

War Housing Policy Outlined

Pointing out that the War Production Board has jurisdiction over the materials and equipment out of which housing is built, while the National Housing Agency has at this time the single objective of providing housing for war workers, Administrator Blandford cited a statement of objectives in which these two agencies have recently joined. In this there is a firm agreement

AT THE OPENING OF THE WARTIME HOUSING EXHIBITION

Left to right: John B. Blandford, Jr., Administrator, National Housing Agency; Mrs. Samuel I. Rosenman, Chairman, National Committee on the Housing Emergency; John Hay Whitney, President, Museum of Modern Art

that war housing is absolutely essential to the war program, and that materials for this housing must be made available.

The high spots of the present war housing policy were outlined by Mr. Blandford as follows:

"The necessity of conserving materials requires that war housing be limited to that required to meet the need arising out of the essential in-migration of war workers from beyond the distance of feasible transportation into localities of intensive war production.

"The War Production Board endeavors to reduce this in-migration by guiding war contracts into localities where there is a labor supply and housing, by full utilization of local labor, by sub-contracting, and by conversion.

"The National Housing Agency attempts to reduce the need for new housing by promoting a Home Utilization and War Guest Program, and by encouraging the conversion, repair, and improvement of existing dwellings.

"Private enterprise is called upon to meet a major part of the need for permanent family units. An increasing part of these units are programmed for rental housing. Administrative regulations with respect to sale price, rents, and location attempt to focus this private housing clearly on the need of war workers.

"After private enterprise has exhausted its contribution, there remains a large housing need for lower income war workers and for temporary needs for which public funds are required. Public housing includes a substantial amount of family units of permanent construction and a larger amount of demountable family units, temporary "war apartments" of small housekeeping units, and dormitories for single persons and for persons who may for a time leave their families at home. Stopgap housing such as trailers is provided only where absolutely essential to provide some type of shelter until standard housing can be built.

"For all types of housing, it is intended that every ingenuity be exercised to minimize the use of critical materials, and housing is to be so located as to conserve to the maximum rubber and gasoline and materials for utilities and transportation equipment. . . .

"The establishment of the National Housing Agency was essentially an action of unification. It was a move designed to close ranks and strengthen the housing sector of the war front. It symbolizes the total approach to war housing. It provides an opportunity for the full mobilization of private and public resources, of banks and savings and loan institutions, of realtors and public housing agencies, of architects, engineers, contractors and workers, of local, state, and federal officials to meet the need of housing the in-migrant army of war workers. Time is short, and labor and material must be conserved. We will all do the best job possible. There may be errors of judgment, but not of intent.

"When this war is won, when victory is clearly within our reach, we will then face the constructive task of clearing up the ravages of war and take up the stimulating task of rehousing Americans. For this job we will be better equipped because of the experience gained, because we will have learned to work together, because we will have wider horizons and a better feel for the things that are important."

President Roosevelt Urges Citizen Interest

In a letter to Mrs. Samuel I. Rosenman, as Chairman of the National Committee on the Housing Emergency (512 Fifth Avenue, New York), on the occasion of the opening of the Wartime Housing Exhibition, President Roosevelt said:

"Sufficient homes for workers in war industries are an essential element in the whole program of making the weapons of war. Local citizen interest in the provision of war housing will provide a great stimulant in this effort, especially in those localities throughout the country where the situation is most acute. Citizens' organizations such as your Committee can be most helpful in promoting not only this local interest but a widespread national interest as well.

"An appreciation of the necessity for providing a war worker with the comfort of a proper home for himself and his family will lead to close cooperation between federal officials and the officials and citizens of different localities in the United States. I am confident that with such cooperation we can make great strides in attaining the objective of adequate wartime housing, not only with public funds, but through the stimulation of the use of private capital as well."

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A Letter from OCD to The American City

The American City's front cover editorial of last month, "This War Will Not Be Won By Hiding Under The Bed," has brought the following comment from E. A. Sheridan, Assistant to Director James M. Landis, of the Office of Civilian Defense:

"Mr. Landis and I have read the cover editorial of your April issue. We both like it and agree with you that 'alarmist propaganda' and 'excessive precautions at home' should be out. We do not feel that the program we advocate can be described by either of these phrases.

"We are attempting to strike a happy balance between the kind of home preparation that will stimulate confidence and satisfaction on the part of the public that their lives and property are safe under the circumstances and at the same time not divert vital materials and manpower from military and production forces. We believe that we can have civilian protection sufficient to minimize damage from possible enemy action and at the same time not hamper the activities of our armed forces and war production plants. We believe, however, that it is necessary for the morale of the soldier and worker to give assurance that the home and fireside are not left unprotected. Our program is not one of personal 'safety first' but rather one of protecting all things which are necessary for successful prosecution of the war."

The American City and OCD are evidently in essential agreement on this important question of public policy; for although our editorial emphasized the urgent need for "a vital public spirit concerned much more with achieving victory abroad than with saving the skins of the timid at home," it also recognized the importance of "intelligent activities of civilian defense councils" and of "Red Cross preparedness for disaster relief," while urging "every public and private service that can contribute constructively toward success in democracy's titanic struggle for Victory and Humanity."

OCD Streamlined for War

By Executive order President Roosevelt has established a Civilian Defense Board within the Office of Civilian Defense to integrate OCD activities more closely with those of other federal, state and local war agencies.

Director Landis had the following comment to make in the April 21 issue of *Victory*:

"The new Executive order is significant to me because it accomplishes two very important things: First, it streamlines OCD for war in a manner in which I believe it should be streamlined, and second, through the creation of the Civilian Defense Board, it integrates the operations of OCD with those of the total government program for prosecution of the war. I am, needless to say, very much pleased with the new order."

Members of the Board are:

James M. Landis, Chairman, Director, OCD
Henry L. Stimson, Secretary of War
Frank Knox, Secretary of the Navy
Francis Biddle, Attorney General
Paul V. McNutt, Director, Office of Defense Health and Welfare Services
Maurice J. Tobin, Mayor of Boston
Earl D. Mallery, Executive Director, American Municipal Association
Norman H. Davis, Chairman, Central Committee, The American National Red Cross
Harold Stassen, Governor of Minnesota

Under the order, Director Landis will perform his duties under supervision of the President, with the advice and assistance of the Board.

An Impounding Reservoir Supplants Artesian Wells

Aberdeen, S. Dak., Balanced the Possibilities and Selected an Adequate Supply Suitable for Domestic and Industrial Use

By Frank E. Guhin
Commissioner

ABERDEEN, S. Dak., the second largest city in the state, has not grown as rapidly as other progressive municipalities, because it has no large industries and is dependent entirely on the agricultural surrounding. However, this lack of growth can be attributed somewhat to the water in use up to the year 1934.

Prior to this time, Aberdeen's water supply was from deep artesian wells, five in number, each one over 1,300 feet in depth. Water from these wells flowed to a main reservoir and was pumped into the distribution system. This required continuous pumping, leaving consumers with a tap pressure ranging from 30 to 45 pounds. The water was very hard and showed an enormous iron content. It was especially objectionable for industrial uses. In addition to these objections, the water level was becoming lower each year so that the city anticipated being forced to augment the present system in some manner.

To meet this situation, the council retained a firm of consulting engineers to find a suitable supply. After making a rather comprehensive report on the possibilities, they recommended an impounded supply in preference to either deep or shallow wells. After studying all available sites, and making detailed reports on the four that seemed most promising, the engineers recommended the use of a site on Willow Creek, some 22 miles northwest of Aberdeen.

Acting on this report, and working from plans and specifications prepared by the engineers, the city proceeded to award contracts financed by a $515,000 bond issue and a $140,000 government grant. The project includes not only the dam, pipe line, and filtration plant,

This 500,000-gallon elevated storage tank permits cessation of pumping at night

but also a 500,000-gallon storage tank, located in Aberdeen. This has a height of about 145 feet, provides uniform distribution pressure, and permits the shutting down of the filtration plant at night. The tank also makes it possible to operate the pumps at full capacity. The water level is governed by recording instruments in the water-works office which is in the Municipal Building and is interconnected with the filtration plant by an alarm gong.

The reservoir that was constructed covers approximately 850 acres. The dam, 1,400 feet in length, creates an artificial lake averaging over 20 feet in depth at the dam site, about 300 yards in width, and approximately 2½ miles in length.

The spillway is 700 feet long with concrete base and sides and 6-inch tile underdrains laid under the weir and under the concrete floor to prevent the development of upward pressure when the water level is near the crest of the spillway. It has a capacity of 25,000 cu. ft. per second with a head of approximately 6 feet on the weir, and the width of the channel varies from 40 to 90 feet. The amount of money put into the spillway is almost as great as that put into the dam proper. When full, the reservoir will hold 1,300,000,000 gallons, a full two years' supply for Aberdeen's populace of approximately 17,000.

Ultimately the acreage surrounding this reservoir will be subdivided into lots to afford an opportunity for building summer cottages where

The No. 2 diversion dam on the Elm River, showing the 4-foot flash boards. The other Elm River dams are of similar construction

there will be fishing and other lake resort pastimes. Development will be gradual and consistent with the building of proper roads and the money available.

It was necessary to purchase 80 acres of land to locate the filtration plant proper. This acreage will also be converted into park property insuring adequately improved roads, flower beds, trees, shubbery, and the like. The filtration plant, located eight miles northeast of Aberdeen, is of modern architectural design. With a capacity of 4 million gallons per day, it not only filters and purifies the water, but softens it as well. On the second floor are housed the chemical feed machines with hoppers extending to the third floor where all chemicals are stored. The wash-water tank is on the fourth floor in the tower at the front of the building. A unique feature of the plant is the manufacture of carbon dioxide which is obtained from the heating boiler by the use of two oil-burning units. One large unit heats the plant in the winter; the small unit is for summer use.

The plant includes two rapid mixing basins, two flocculators, a lime feeder and slaker, two settling basins, dry feed machines for chemicals used, and an activated carbon plant. Included also are high- and low-lift pumps, in duplicate, and a wash-water tank built within the structure in order to protect it from the severe winter weather. Another feature is a standby LeRoi gasoline pump which serves in case electric power is not available. Incidentally, in the seven years of operation, this pump has been used for a total of five days when the power was entirely off. During this power interruption, the water department was the only utility that had continuous service.

Plant Operation

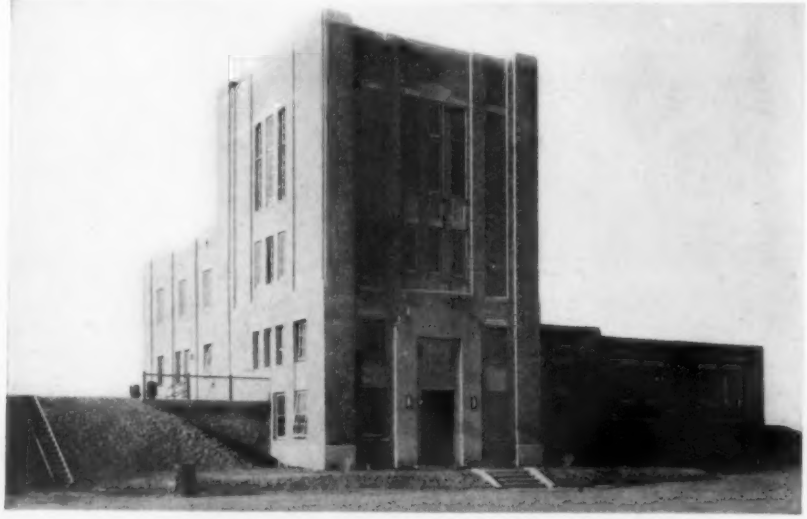
The operation of the filtration plant is under the direct supervision of a superintendent, a full time chemist, and four operators working eight hour shifts, six days a week. In actual operation, the water is pumped first to the south rapid mixing basin where it receives a measured amount of lime. It then goes to a flocculator and proceeds to the south settling basin for a more extended detention period. Carbon dioxide gas is applied, and the water is then conducted downward to the rapid mixing basin where alum is added. From the north basin, a 24-inch pipe carries it to the filters. Both the piping and the valves permit of treatment in either the north or the south basin, parallel or singly. Prechlorination or post-chlorination is permitted through the rapid mixing basin piped from the chemical machine. Post-chlorination is used at present. Recently, activated carbon has been used extensively, also solium aluminate. The carbon dioxide plant consists of a scrubber, sulphur remover, motor-driven air compressor, and indicating flow gauge. Gas is drawn from the flue

Map of the water supply system of Aberdeen, S. D., showing Willow Creek Dam and Lake, and the location of the filtration plant and city

of the boiler and, after being washed and cooled in the scrubber, passes through the sulphur remover. It is then pumped to either conduit between the settling basins and applied to the water through a grid of ¾-inch pipes on 8-inch centers. A 24-inch cast-iron pipe carries the settled water to the four mechanical filters each rated at a maximum of 1½ mgd.

It may be of interest to know that the flow from the artesian wells has been diverted to a small creek in an area where we are now making a park development.

Alvord, Burdick and Howson, were consulting engineers for the improvement. W. F. Cochrane was PWA State Engineer. Contracts covering the work were as follows: Willow Creek Dam and Spillway by C. A. Wagner Construction Co., Sioux Falls, S. Dak.; Elm River Dams by Campbell, Lowrie and Lautermilch, Chicago, Ill.; filtration plant by S. W. Jonason Co., Aberdeen, S. Dak.; filter equipment by the Roberts Filter Mfg. Co., Darby, Pa.; the pipe line, Barnett & Record Company, Minneapolis, Minn.; the overhead tank by McClintic-Marshall Corp., Pittsburgh, Pa.; cast-iron pipe, United States Pipe and Foundry Company, Minneapolis, Minn.



The filtration plant with the enclosed wash water tank

The Operator's Standpoint on Sewage-Plant Design

Practical Observations on How to Improve Sewage-Treatment Plants

By ARTHUR F. LEHMAN
Superintendent
Hackensack, N. J., Sewage-Treatment Plant

WHENEVER sewage-plant operators gather together and talk shop, they inevitably and generally pungently give the designing engineer full blame for all errors and omissions of plant design or construction. Yet to anyone familiar with design, construction, and operation of sewage plants it is surprising that so many plants are well laid out, for beyond the large primary questions to be decided, there are a vast number of details relative to layout, connections, operating efficiency, convenience, and economy, which are fully as important in the aggregate as the larger questions.

It was recently stated by Mr. Charles A. Emerson, noted sanitary engineer and past president of the Federation of Sewage Works Associations, that there should be some way of recording for the use of designers and sanitary engineers the suggestions of operators concerning plant improvements. This article is an attempt to put that suggestion into practice and is the outcome of a recent paper by the author.

Centralize Equipment

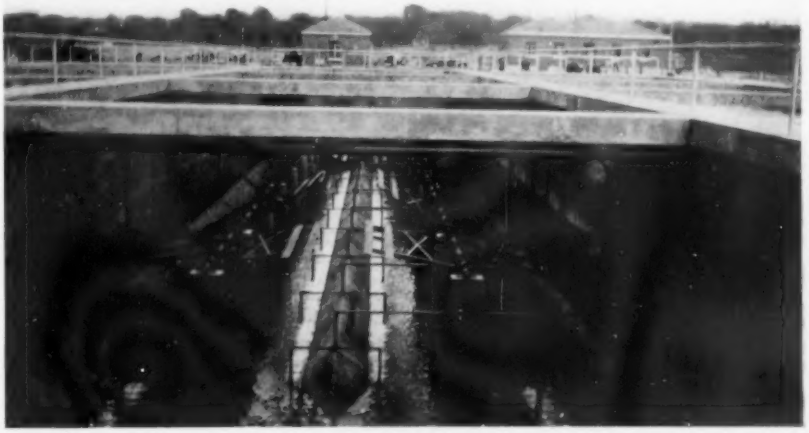
Centralization of equipment should be one of the first considerations. One operator can often take care of a single plant but cannot take care of two. In the case of Hackensack, an interceptor carries part of the city's sewage to a point two blocks from the main plant. From there all the sewage is pumped to the main plant after passing an automatic screen. Unfortunately, disposal of the screenings is not automatic so that extra operators are necessary, particularly with the high flows occurring during and after storms. If an enlarged interceptor had been carried the two blocks to the main plant, both the pumps and screening equipment would have been under the direct observation of the operator.

In the same manner, economy and efficiency can be increased by centralizing buildings and units within the plant. With our office and laboratory located at the extreme effluent end of the plant, we find ourselves wasting many steps getting to and from grit chambers, primary tanks, and points of returning sludge. Location of the digestors and filter building a hundred yards away presents the same problem. If the main building that contains the office, laboratory, blowers, pumps, and other equipment, had been located at the ends of the aerators, it would have allowed shortening air lines, gas lines, and return sludge lines. Air lifts with open conduits along the aerator walks could have been effectively used instead of the present long pipe lines and expensive plunger pumps. Air lifts, once considered for this purpose, now seem to be ruled out because of the location of and the loss of head in existing 6-inch sludge lines.

Provide for Flexible Operation

In plant design, all the steps of operation and all possible combinations of circumstances should be kept in mind to facilitate plant operation. A flexible design allows the operator to adjust his plant for optimum treatment. For instance, multiple-level drawoff pipes and sampling cocks on secondary digestors make it possible to choose the clearest supernatant drawoff. As another example, the Hackensack plant provides for the closing of all units at both inlet and outlet so that any unit can be cut out of service for cleaning and repair.

This feature must be studied carefully, however. Friction loss between tanks, when one unit has been cut out, often produces difficulties. At the higher rates of flow, the effluent flumes of the circular primary clarifier fill over the weir level and, instead of flowing radially outward in all directions to give maximum detention, the sewage



One of the four aerators when empty. Air diffusers are shown by lines of white bubbles in the bottom of the tank. Paddles also are visible

flows directly from the central inlet to the main outlet of each tank. This may reduce the settling period to as low as ten minutes. The same condition is created by cutting out more than one of the four aeration tanks, or by cutting out one of the two primary clarifiers, even at low flows, and it formerly existed in the final settling tanks. We removed the weir plate and angle from the plant effluent weir and cut down the level of the concrete weir, overcoming the difficulty there.

If the problem of friction loss in these connecting pipes were more completely overcome it would be possible to cut out one primary tank during low flows in the summer and thus reduce the overlong detention period of 4 or 5 hours. It would also permit emptying one tank for cleaning and repairs. A substantial saving in electric power could also be made at such times by cutting out one or two aerators and using a smaller amount of air than the four tanks require. A similar economy could be effected by reducing the load on the aerators during high flows when settleable solids are carried through the primary clarifiers by flooding of the circular weirs.

As a matter of fact there would seem to be good justification for the use of low-friction open channels between units instead of the existing pipe connections. We hope in the future to construct such flumes at least between the primary clarifiers and the aerators. An additional advantage might be obtained by preaeration in these flumes to increase the quantity of dissolved oxygen at the inlet end of the aerators.

Why Operators Turn Grey

Our primary clarifiers were connected by a sludge line to a well 600 feet away. Primary pumps in the basement of the filter building pumped sludge from this well to the digestors. One man had to operate the sludge line valve at the primary clarifier according to the signals of another who watched the well and operated the pumps. In addition to this, the gravity line became clogged so easily that we found it necessary to connect the pumps directly in the line.

Furthermore, the thin primary sludge aggravated a condition caused by omission of a sludge thickener. As originally built, the plant provided no alternative to sending waste activated sludge directly to the digestors. To make the situation worse, there was no means of heating the digesters at all until they had been in operation long enough to produce gas.

Economy of construction was doubtless secured by conversion of Imhoff tanks into digestors, but operation appears to have suffered somewhat. Avoiding heat loss through ground water is good reason for building digestors above ground and covering with earth for insulation. Adequate heating coils and circulating pumps are a necessity for proper digestor operation.

Auxiliary Gas Boilers

Great care should be taken to assure gas-tight digestors. Soon after gas started forming we discovered a leak along a construction joint between the two primary digestors. We have tried several methods of sealing, with apparent success on the last one tried. Several times before its use we had to use an auxiliary oil boiler when our gas supply to the gas boiler failed because of the leak. This auxiliary boiler was installed after completion of the plant for such emergencies.

A water trap was found in our gas line from the secondary digestor when the flow suddenly stopped the first day the gas boiler was started.

A great deal can be done to prevent trouble by providing ample pitch on gas lines to drip traps and by eliminating pockets where water can collect and stop the flow of gas.

Vacuum Filters

As stated by Mr. Adams, Superintendent of the Tenafly Disposal Plant: "Raw activated sludge has a bad reputation and I think its optimum in cussedness is reached when it comes in contact with a vacuum filter." Digested mixed primary and activated sludge falls into the same category in regard to vacuum filters—with the additional disadvantage of using more chemicals. Our sludge has a tremendous

Mass of material which catches on digester heating coils. Also cake on coils, mostly lime

lime demand—30 to 40 per cent. Unless a pH of 11.7 is maintained (saturated lime solution), the sludge cannot be filtered.

When the quantity of sludge filtered falls below the volume of raw sludge pumped into the digestors, supernatant overflows to the sludge beds, or to the lagoon if the beds are filled (lagoon space should be provided for every plant for such emergency use. When a tank must be cleaned or a digestor emptied for repairs, for example, there is often no alternative but to put the sludge in a lagoon, repellent as the idea is to the idealist). Activated sludge plants will continue to be at a disadvantage unless adequate means are provided for disposal of sludge.

Points to Keep in Mind

Experience at our plant shows the following additional points to consider in design:

1. Wherever possible keep machinery indoors or covered to prevent freezing and snow nuisance. Chains traveling in and out of water tend to collect ice. Avoid uncovered pits. Chlorinators should be kept above 50° at all times.

2. Eliminate outside valves where possible. They are nasty to operate in bad weather and those underground are subject to breakage or clogging of valve stems. Quarter-turn plug valves save a lot of time and energy, particularly

where sludge lines must be opened and closed frequently.

3. Keep all motors off the floor to prevent damage from washings or unexpected flood. Connect pumps directly to sludge lines rather than to wells. If a pipe discharges into a well, leave a bell end in the wall so connection can be made from it if necessary in the future. Provide automatic float switches on pumps handling drainage or overflows. Keep all piping as short as possible, particularly heating lines and gas lines. Allow large enough pipe sizes particularly in sludge lines to prevent excessive friction.

4. Where multiple tanks are to be in service for all phases of a single process, make it possible to operate each group as a unit.

5. In high ground-water areas, tie down the tanks so they won't float when they must be emptied.

6. Balance operating savings against the cost of gas engines where separate digestors will provide gas. They may be worth while if built in the plant, but are too expensive if they must replace existing equipment.

7. Provide means of recirculating sludge in the primary digestors. Provide means of returning sludge that won't filter.

8. Provide storage space for chemicals and means of handling them both in unloading and in using them. Provide ventilation in the filter building where chemicals and blowoff fumes from the filter may be harmful. Provide adequate means of handling the filtered sludge.

9. Provide a workshop, men's locker and washroom (with hot water), and general storage space for tools and equipment such as portable pumps, hose, cleaning supplies, pipe and fittings, oil, etc. Don't economize on office and laboratory space.

10. At activated sludge plants, provide metering of air to each tank or preferably of dissolved oxygen in each tank.

11. Use stairways rather than ladders.

12. Incorporate some of the good features of our plant such as duplicate pumps and blowers, adequate air supply, wrought-iron pipe, sewage and return sludge meters, separate chlorine building, good grit collecting equipment and settling tank equipment (including scum removal), good primary sludge pumps, substantial buildings, a fence to guard the complete plant and good roads to get around it.

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Plight — Blight — Flight

Excerpts from "Building a Better Boston: A General Statement on Rehabilitation and an Analysis of Existing Conditions in the South End," by the City Planning Board of Boston, Mass.

IN common with every large city in the country, Boston is faced with the effects of decentralization and is confronted with the necessity for taking stock of the physical and economic condition of its central areas. Alarm must be felt over the *plight* of the central districts, the *blight* of the residential areas and the *flight* of the upper and middle income groups from the city. The time has come when the city must take vigorous action to apply an antidote.

A high tax rate is not the primary cause of decentralization, but decentralization is a cause of the high tax rate. The climb in Boston's rate is due to the decline in the total assessable valuation within the city's limits, while public service costs have had to continue with the addition of enormous welfare and relief costs. To take care of the source of revenue, it is essential for the city to protect the tax-paying ability of the 22 per cent of its gross area which pays the deficit incurred by the other 78 per cent.

Superficial Relief Ineffective

The complexities of the situation are difficult. Relief cannot be given by merely going through a superficial process of reducing and equalizing assessments on real estate coupled with economies in city administration and services. The roots to the evil of economic back-sliding are deeper.

The problem facing the city of Boston is the need to rehabilitate the deteriorated areas so that the ravages of depreciation may be overcome, and so that attractions may be substituted which will counteract the forces of decentralization.

Possible Changes in Methods of Taxation

Possible changes in methods of taxation, include the following:

(a) Evaluation of the difference between taxes imposed to cover cost of public services rendered to property, and taxes imposed to cover cost of public services rendered to people.

(b) Consideration of the pros and cons in regard to a shifting of the tax burden from emphasis on improvements to an emphasis on the land.

(c) Enlargement of the tax base from that of individual municipalities to that of the metropolitan area.

New Public Policy Needed

Finally, it may be stated that underlying all the symptoms of blight and decentralization there is one basic cause. It is the absence, hitherto, of that kind of public policy which would prevent any part of the city from being so badly planned, so densely occupied, so deficient in open space, or so neglected that people will either leave the city or discontentedly remain to endure inferior living conditions.

Strong planning, zoning, and building regulations, with proper tax policies, will go a long way toward solving the problem of financing rehabilitation projects.

In devising means by which private capital will be induced to invest in the rebuilding of the city, the crux of the problem has been the absence of a constructive municipal policy which would assure to conservative investment a sufficent stability to offset the public control which it may be necessary to exercise in the interest of all citizens.

Constructive policy will be neither simple nor easy. But an attempt to progress along all lines must be made, and an understanding of the nature of the problem must be attained by the various interests involved before a solution can be worked out.

Punched Cards Make and Prove Boston's Daily Tax Report

By Merritt Thompson
City Collector, Boston, Mass.

THE collecting department collects all revenues and taxes due the city of Boston and the county of Suffolk. These include poll, personal, motor-vehicle excise, water, and real estate taxes, indicated by the accompanying bill forms. The daily tax and water receipts are balanced and tabulated by Remington Rand punched-card accounting machines to make up the cash book and bookkeeper's returns covering them.

Prior to the installation of the tabulating machines, all tax cash books were written longhand and the day's receipts balanced by adding machines. Moreover, a separate cash book was maintained for each of our 22 wards, for real estate, personal, motor-vehicle excise, and poll taxes, and separate blotter sheets were maintained for recording water receipts. With the installation of the tabulating machines, these ward books were consolidated into one cash book for the 22 wards on each type of tax.

Simplified Personnel

Without the machines, this balancing and preparation of the cash books required 25 clerks. With the machines, there is a supervisor, control clerk, four key-punch operators, and one tabulating-machine operator—7 persons. The machines comprise four 90-column key punches with verifying attachment, an automatic verifier, mechanical sorter, interpreter, and tabulator.

Fast as are the machines, they were not installed to save time, for statutes require that by any method the day's receipts shall be balanced and turned over to the treasurer the next morning for deposit. The outstanding advantage for us is accuracy and the availability of the former personnel for other duties. Confusion, error, and delay in handling the large accounting detail have been reduced to a minimum. Deputies can maintain a close check on collections to prevent misunderstandings and still give convenience to our 500,000 taxpayers.

Taxes are paid by mail, at the windows, or collected by a constable. Upon payment, these bills are separated as to kind of tax and grouped in convenient lots of not more than 50. The separating is performed by a teller, who makes an adding-machine listing of the amounts received and notes the amount pertinent to each pack of stubs or coupons on the last item of each bundle. This adding-machine listing is kept by the teller as his own working record.

The coupons or stubs each teller has received and bundled into lots are then sent to the tabulating department, which keeps pace with the teller's returns without overtime. Each pack of stubs is stamped with a pack number. The pack number, teller number, kind of tax, and amount received are entered upon the balance control sheet. As each pack is punched, it is checked off on the control sheet, and as each pack is proved, a symbol to this effect is placed against the proper pack number on the sheet to show that that particular balance has been verified and is accurate.

Punching the Cards

The various kinds of taxes are coded for punching purposes as per the following code schedule:

Position 1, Column 18—Real Estate Tax
Position 3, Column 18—Motor-Vehicle Excise
Position 4, Column 18—Fire Pipe
Position 5, Column 18—Personal
Position 6, Column 18—Miscellaneous Charge
Position 7, Column 18—Poll
Position 8, Column 18—Water

The amount of information on the tax bills varies according to the kind of tax, so that a greater or less amount of information may be punched into the cards. Although in all there are seven different types of tax reports handled by the tabulating department, fire pipe and miscellaneous occur so seldom that they are omitted from the forms shown here.

With the exception of real estate tax, a manila summary card is cut for the total of each pack at the same time the detailed cards are punched. This card contains such information as the teller's number, pack number, and amount paid. The card follows the detail cards and is removed only as proof listings are being made and then only if it agrees with the total as listed by the tabulator. Since real estate tax has several different types contained within it, the summary cards for this tax are punched from the proof listings after they are marked according to the various classes of taxes by the checking clerk.

A salmon summary card is punched from the grand totals of the tabulators, which totals are being accumulated as the proof listings are made. This summary card contains such information as kind of tax, year, amount of tax, fees and charges, and total paid.

On completion of the punching of several packs of stubs, the operator re-punches the cards with the verifying attachment in the operative position, punching the same cards in the same manner with the exception that only the first letter of the last name is used. After the cards have been verified in this manner, the tabulating operator collects the cards and stubs and runs the cards through the interpreter. When interpretation is complete, the cards are run through the automatic verifier, and any errors discovered are noted and corrected.

As soon as cards are known to be correct, they are listed on the tabulator for a proof. The listing, cards, and stubs are then sent to the control clerk. The cards and proof sheet for each pack are readily identified by the pack number previously machine-stamped on the stubs. The control clerk determines that

Two views of Remington Rand tabulating equipment used in Boston, Mass., tax work; at left, the key punches which hole the data into cards; at right, the tabulator which prints reports from the cards

the pack numbers on the cards, proof sheet, and stubs correspond, and checks the money total as shown on the proof sheet against that noted on the last stub of each pack. Any errors are noted and corrected.

Cashier's Return

The manila summary cards, which were punched for the total of each pack, are combined with the salmon-colored summary cards, and a report is made for each type of tax. In this report, the pack total summary cards are listed first, followed by the grand total summary cards. These two totals must equal, providing an automatic balance as a further proof of accuracy.

Cash Book

The detail cards for the day for each type of tax are sorted separately, putting the cards in sequence by bill number. They are sorted down by the various wards, then needle-sorted for year. When sorting is completed, the cards are tabulated separately for each tax type on cash-book sheets. All items are listed in order by wards, for a total of each ward, and then for a grand total of all wards for a year. Each year is listed separately by wards. This record remains in the tax collector's department and is bound in a loose-leaf book.

The several operations involved follow a systematic routine on normal days; during the few peak-load periods of the year when tax payments are particularly heavy it is only necessary to arrange for additional temporary punch operators and punching machines. Daily balancing is an assured fact, and the tabulated records are concise, legible, and accurate.

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Winning Cities and Counties in National Health Contest

WINNING cities and counties in the National Health Conservation Contest, conducted jointly by the Chamber of Commerce of the United States and the American Public Health Association, were announced on April 16 by the Contest Grading Committee, of which Dr. W. S. Rankin, of the Duke Endowment Fund, Charlotte, North Carolina, is chairman.

The winning cities:

Detroit, Mich.	Madison, Wis.
Evanston, Ill.	Memphis, Tenn.
Greenwich, Conn.	Milwaukee, Wis.
Hackensack, N. J.	Newton, Mass.
Hartford, Conn.	Racine, Wis.
LaSalle, Ill.	Reading, Pa.
Louisville, Ky.	Schenectady, N. Y.

The winning counties:

Alger-Schoolcraft Cos. Mich.	Glynn Co., Ga.
Arlington Co., Va.	Lauderdale Co., Miss.
Davidson Co., Tenn.	Madison Co., Ky.
Fayette Co., Ky.	Saginaw Co., Mich.
Forsyth Co., N. C.	Santa Barbara Co. Calif.
Gallatin Co., Mont.	Thurston Co., Wash.
Gibson Co., Tenn.	Whitman Co., Wash.

The contest is conducted in two sections, one for cities, known as the City Health Contest, and the other for counties, known as the Rural Health Contest. The year 1941 was the thirteenth year of the city contest and the eighth year of the rural contest. The city contest is financed by the Metropolitan Life Insurance Company and the rural contest by the W. K. Kellogg Foundation, of Battle Creek, Michigan.

Participants have found in these contests an effective means of focusing public attention upon the strengths and weaknesses of their local health services and upon the need for maintaining effective health protection at all times.

Special emphasis has been placed upon the need for continual vigilance and protection of public water supplies, for more effectively pasteurized milk, and for more wide-spread protection against diseases for which protective measures are available.

Navy Building and City Planning

By A. J. Hepburn, Rear Admiral, U.S.N. (Ret.)
Director, Office of Public Relations
Department of the Navy

IT IS to be profoundly regretted that, in the haste and urgency of war effort, some cities have felt that defense building in their localities has been inconsistent with sound city planning. In this connection I should like to take this opportunity to clarify the Navy's building policy.

The Navy maintains a special Board of Engineers and Architects, whose major responsibility is to assure the best use of city areas for Navy building projects in the present emergency. Similarly, the municipalities maintain their own planning staffs, whose chief concern is to maintain sound principles of city expansion without delaying the nation's war effort. The problem, then, is one of cooperation and collaboration between these agencies to the satisfaction of both municipal governments and local Navy officials.

In considering specific building projects in any locality, the Navy welcomes the guidance of the city planning staff, but has found that in many cases these staffs are unprepared to give advice or assistance with the speed that is essential in the present crisis. Municipalities in which Navy projects are proposed may avoid difficulties and misunderstandings in advance by strengthening their local planning agencies, which should in turn prepare recommendations as to areas available and specifications for roads and utilities.

The first concern of the Navy in all its building projects has been and must continue to be speed rather than aesthetic value. Time is the all-important element. This is one explanation of the fact that the structures commonly erected by the Navy have the plainest design and cheapest construction consistent with the use for which they are intended. In addition, the temporary type of construction reduces to an absolute minimum the labor and materials expended on the work and insures that normal city expansion may continue on the building sites as soon as peace returns. The projects now in the process of construction are not intended for peacetime operation of the Navy. They are intended only to contribute to the immediate war effort and then to be destroyed as soon as their usefulness is terminated. It behooves city planning agencies, therefore, to devote their attention to the development and beautification of the present defense areas when they have served their usefulness to the Navy.

I reiterate that it is the desire of the Department of the Navy to help, rather than hinder, sound town planning so far as the essential speed of the war effort will permit. The concern of the Navy is to win the war as quickly as possible; the concern of municipalities must be long-range planning, keeping in mind the purely temporary character of the projects under construction in the present Naval building program.

• • • —

Relation of Civilian Defense Councils to City Governments

Most Chairmen Are Mayors; How Staffs Are Organized and Volunteers Are Trained

THE important rôle played by municipal governments in organizing local defense activities is indicated by the fact that the mayor serves as chairman of the local Civilian Defense Council in approximately 70 per cent of the cities of over 10,000 population throughout the United States. This figure is based on a tabulation in the 1942 Municipal Year Book (to be published this month by the International City Managers' Association). The tabulation also shows that in 3 per cent of the defense councils the city manager is chairman, and in 2 per cent a councilman. In a few cases another city official, such as assessor, fire chief, judge, city attorney, city clerk, or commissioner of welfare and safety acts as chairman. A private citizen is serving as chairman in only 11 per cent of the defense councils.

Organization of Administrative Staffs

Slightly more than half of the cities are employing a director or executive secretary to head the administrative staff of their defense council. In many cases, regular city officials are serving as part-time directors. Thirty-five per cent of the cities having defense directors, however, employ them on a full-time basis. A very few city defense councils have multiple executives ranging in number from 2 to 5 full-time directors and up to 10 part-time directors. In 13 cases a full-time volunteer serves as director, and in a number of instances a director serves without pay on a part-time basis.

In general the basic theory underlying city defense councils is that the council should act principally in an advisory capacity to existing regular and emergency administrative agencies of city government. Recognition of

this advisory function is borne out by the fact that the dirctor in an emergency situation is in the great majority of cases a regular municipal official. In council-manager cities, the city manager is named to serve as director in emergencies. In most non-council-manager cities this duty is assigned to the mayor, although in a few cities the fire or police chief or some other city department head is designated.

Training of Volunteers

In its discussion of the data brought out through its questionnaire, the Municipal Year Book says in part:

"Training of volunteers in emergency defense services, air raid warden, auxiliary police and firemen, fire watchers, medical corps, rescue squads, and nurses' aides, is generally being administered on the municipal level. In each of the six fields a wide variety of training agencies is reported, but most cities evidence a decided trend toward use of existing city departments and organizations. City police departments, civilian defense training agencies (particularly the air raid warden service), fire departments, and local Red Cross chapters, in the order named, are the most frequently reported training agencies for air raid wardens. Auxiliary police are being trained by city police departments with but few exceptions, and auxiliary firemen by city fire departments. In each of these fields and in many cities, the Red Cross is cooperating in volunteer training. The municipal fire departments are the principal agencies engaged in training of fire watchers, although some are being trained by the air raid warden service. In a number of cities, police departments, fire departments, and the Red Cross have combined efforts in training volunteers for police and fire service.

Red Cross Has Important Role

"Agencies training medical corps, nurses' aides, and rescue squads present a somewhat different pattern. The Red Cross plays an increasingly important rôle for these three services and is the chief agency training municipal medical corps and nurses' aides. The second most important agency training medical corps is the local medical association, followed closely by municipal health departments and hospitals. In training of nurses' aides, local health departments and hospitals rank second, with medical associations third. The chief training agency for rescue squads is the city fire department, followed closely by the Red Cross, training agencies of the civilian defense organization, and the city engineering or public works department. In many cities the agencies mentioned are cooperating with one another in training volunteers.

"Only a few cities report that unofficial groups, such as veteran's organizations, the American Women's Volunteer Service, retired Army officers, responsible citizens, and the like, are training volunteers. In the vast majority, training is conducted by an official agency. Here, also, a border line exists between official and unofficial. As noted above, the Red Cross, a "semi-official" organization, is a leading training agency in all of the six fields under consideration. Local medical associations and, to a lesser extent, associations of nurses are playing an important rôle in training medical corps, nurses' aides, and rescue squads.

"It is evident from the above results that American municipalities are following the wise course of using existing agencies, where qualified, to train civilian defense volunteers, thus conserving effort and drawing upon established sources of technical knowledge and, as is often the case, using agencies with considerable experience in the training field, such as police and fire departments and the Red Cross."

• • • —

Municipalities Adopt Wartime Ordinances

WARTIME IS ADDING MANY SPECIAL LAWS to municipal statute books in addition to general blackout and air raid protection ordinances giving broad powers to local chief executives, reports to the American Municipal Association show. The new ordinances range from laws increasing tire-theft penalties to control of rents.

Many cities have levied more stringent penalties for tire stealing—Birmingham, Ala., enacting an ordinance providing for both fine and imprisonment or hard labor; Columbus, Ohio, extending punishment for tire theft to include removal of any parts of motor vehicles or starting or changing any device on them; Lakewood, Ohio, including penalties for buying, receiving, or possessing stolen auto parts.

Lansing, Mich., attempts to guard against tire theft by requiring second-hand dealers to thumbprint persons from whom they buy bicycles, micrometer tools, tires, and accessories, while Little Rock, Ark., requires second-hand tire dealers to file monthly reports with the police departments showing serial number and manufacturer of tires they buy for resale.

Among cities establishing leave-of-absence benefits for employees in the armed forces are Evanston, Ill.; Akron and Columbus, Ohio; Detroit and Flint, Mich.; St. Petersburg, Fla.; and Seattle, Olympia, and Bellingham, Wash. Evanston is one of the few cities providing supplemental pay—up to three months after induction—for employees in service. Various benefit rights such as promotion, retirement, vacation, and sick leave are protected in rulings of the other cities.

Another new type of ordinance relating to employees is the identification provision found in Houston, Tex., and Chicago for Park District employees. The identification, to protect municipal properties from sabotage, consists of photograph, thumbprint, and signature.

To facilitate blackout control, several cities, including Atlanta, Ga., and Jackson, Miss., have enacted ordinances requiring owners of business establishments to place electric switches outside doors, so that air raid wardens can extinguish lights. In the same direction, San Francisco has modified requirements for the amount of illumination used as warning signals at street repair jobs. Protection from sabotage in blackouts is the objective of a new Seattle ordinance requiring registration with the chief of police of persons having authority to enter business establishments.

A few cities have enacted rent control ordinances to curb profiteering as a result of local housing shortages. These cities include Baltimore, Washington, D. C., and Neosho, Mo. In general, the ordinances set rent ceilings as of specified dates, allowing landlords some leeway to charge for improvements.

TRUE IN 1839 — TRUE NOW

Are we not then called upon by the highest duties to our country, to its free institutions, to posterity, and to the world, to rise above all local prejudices and personal partialities, to discard all collateral questions, to disregard every subordinate point, and in a genuine spirit of compromise and concession, uniting heart and hand to preserve for ourselves the blessings of a free government, wisely, honestly, and faithfully administered, and as we received them from our fathers, to transmit them to our children? Should we not justly subject ourselves to eternal reproach, if we permitted our differences about mere men to bring defeat and disaster upon our cause?

—HENRY CLAY.

The City and the U S O

(Continued from page 40)

iary to local hospitality programs.

The transit centers are conducted more or less anonymously by the National Travelers' Aid Association as a USO agency. Fine cooperation by the railroads has made them possible. There are 37 so far, at key points, with 64 others planned. Each comfortable, attractive lounge provides space to rest, relax, sleep. In some cases the centers, already staffed by more than 4,000 trained volunteers, operate on a 24-hour schedule. Recently, at the Pennsylvania Station lounge in New York City, 500 gallons of coffee and 7,000 doughnuts were served 5,000 transient soldiers in one day.

There are 398 USO clubs in the Continental United States, 21 in Alaska, the Canal Zone, and at various bases overseas. USO workers number 1,248. A recent YMCA survey indicates that between a third and a half of all our men in uniform are using the clubs to some extent, with the patronage figures climbing rapidly. At the request of the War Department, USO has assumed direct supervision of all centers overseas. The agencies comprising USO are completely wiped from the picture away from home.

"I thought I knew USO," a friend told Prescott S. Bush, 1942 National Campaign Chairman. "Then I spent an afternoon at a USO Club. Now I'm a hundred times more enthusiastic." Maybe that would be a good idea for everyone. First-hand observation has turned many carping critics into ardent USO members, figuratively and literally.

Urban Planning and the New Mobility

(Continued from page 45)

on this need of the acquisition of public land reserves. Many leading cities in the Scandinavian countries — Poland, Austria, and pre-Nazi Germany — have for many years followed a definite policy of public land acquisition. It has been found that these backlog areas have served a multiplicity of purposes, providing space for recreation, airports, public housing, and even a form of indirect control of the quality and rental range of residential housing by private enterprise in other parts of the city. In addition, these land reserves have provided areas for expansion and sites for new and unforeseen developments such as those now arising from increased air transportation.

It is probable that greater mobility in the air will accentuate decentralization, unless the rehabilitation plans now being evolved include provision for the requirements of increased air travel.

Municipal Land Reserves

Aerial transportation is distinctive in that there is no necessity for building and maintaining costly rights-of-way. Given a multiplicity of air terminal facilities, a system of aerial traffic is exceedingly flexible. From the point of view of urban land use, the problem is to set aside areas for probable use in connection with air expansion at strategic locations with respect to business, industry, and residences.

If in the past land reserves had been gradually acquired as standard municipal policy and had such areas been located with an eye to the future, urban congestion would present a far less serious problem today. Unless provisions are deliberately made to cushion the effects of technological developments and changes in habits of living, we can expect a new urban dislocation as disruptive as that which accompanied the coming of the automobile. One of the best forms of contingent insurance for cities against inevitable change is the acquisition of strategically located reserves of open land. Whatever future developments may take place in air transportation, these lands may be used to advantage.

Not to Become a Ghost Town

(Continued from page 49)

This survey is much more than a commercial undertaking. It is and will be an educational enterprise. It is not only expected to put new, cooperative life in the regional economy; it is also being taken into the schools, where the information is to be taught to students, that they may know the region in which they live. For the first time, high school students and their teachers have made an important contribution to the economic life of the region. They have become aware of what it is that makes the region tick. Their interest and their loyalty are aroused. For this type of knowledge of the good earth from which we all draw our sustenance is not merely valuable; it can also be made fascinating, particularly to the adolescent mind.

Such a survey is not easy. It stretches the faith and the energy of the community to the utmost. But its benefits are truly great, not merely for a community aroused by portents of decay, but for any community that strives to reach its best usefulness to the area that it serves.

84,300 SQUARE YARDS

of Street Resurfaced for

3½ cents per Square Yard

● Using .328 gallons of MC4; 9.19 pounds of sand; 5.7 pounds of gravel per square yard, the City of Des Moines, Iowa, flush coated 84,300 square yards of park and cemetery streets in 1941 at an amazing cost of approximately 3½c per square yard.

A total of 387.45 tons of sand, 240.3 tons of gravel and 27,680 gallons of bituminous material was used on this project. The bituminous material was applied by a truck-mounted Model 200 asphalt distributor equipped with a 200-GPM pump, 22-HP motor and a 12' conventional suck-back type spray bar assuring them of a minimum of drip and eliminating unnecessary fat or lean spots resulting in costly future repairs.

This is just a small amount of the total street program of the City of Des Moines supervised by Mr. John Budd, Commissioner of Streets, Mr. William Ernst, Street Superintendent and Mr. Harry Cram, Street Foreman.

OTHER PRODUCTS

Emulsion Spray units; Asphalt Distributors; Maintenance Distributors; Tar Kettles; Spray Units; Asphalt Tools; Kerosene and Distillate Burners; Asphalt Buckets; Tool Heaters; Tool Boxes; Gasoline Transport Tanks; Truck Tanks.

SALES OFFICES: Montgomery, North Little Rock, Phoenix, Los Angeles, San Francisco, Denver, Jacksonville, Miami, Atlanta, Chicago, Rock Island, Fort Wayne, Des Moines, Louisville, New Orleans, Lansing, St. Paul, Jackson, Joplin, Kansas City, Springfield, St. Louis, Billings, Sidney, Omaha, Reno, New York, Albuquerque, Raleigh, Salisbury, Fargo, Cleveland, Columbus, Oklahoma City, Portland, Columbia, Sioux Falls, Chattanooga, Knoxville, Memphis, Nashville, Dallas, El Paso, Houston, San Antonio, Salt Lake City, Arlington, Huntington, Cheyenne.

Standard Steel Works

NORTH KANSAS CITY, MO., U.S.A.

He's from Company No. 2—they don't have a Mack!

Type 80—750 gallon centrifugal triple combination pumper, recently delivered to Ogden, Utah, fire department.

Keep your tail up, Dal, old boy—tough luck never lasts forever! Macks are constantly being added to the equipment of on-the-ball fire companies from coast to coast. Maybe, before this very year is out, your own company will boast a Mack and you won't have to eat crow for any man's dog!

Mack fire apparatus is the product of the greatest engineering and manufacturing resources in the whole fire apparatus industry—is carefully designed from wheel rim to cab top to do specific jobs as well as they can be done. And every vital part is made in Mack factories, under the rigorous Mack inspection system, to the unusually exacting Mack standards of performance.

When service is needed, it can be got, quickly and economically, from any one of 70 direct Mack factory branches! Write for information on this superior fire apparatus today!

MACK MANUFACTURING CORP., FIRE ENGINE DIVISION, LONG ISLAND CITY, N. Y.

The Mack fire apparatus line includes triple and quadruple pumpers from 200 to 1500 gallon capacity, hose wagons, city service ladder trucks, squad cars—comprising 14 distinct and specialized models

Mack

Chambers of Commerce in Wartime

Committee Organization for Wartime Activities

JACKSONVILLE, FLA. — The Jacksonville Chamber of Commerce has been completely reorganized to best fit itself into the war effort. The Industrial Committee, which is serviced by three men and two stenographers, has been divided into ten sub-committees, the titles of which clearly indicate the committee's consciousness of the need to cooperate in the war effort. These sub-committees are on the following subjects:

1. Development of new and expansion of present industry and use of great harbor and waterfront facilities
2. Small industry groups in war work
3. Priorities information
4. Raw materials as they relate to industry and study of new substitutes for present and post-war period
5. Containers of all kinds for all Florida products
6. Manufacturing sites
7. Vocational training and skilled labor
8. Employer-employee relations
9. National, state, and local legislation affecting industry
10. Trade development with Latin America and off-shore bases

The Retail Merchants Division has taken a lead in helping local retailers orient their individual problems to the war effort. The division has led a comprehensive campaign for conservation of rubber through curtailment or consolidation of deliveries or both. The division has made every effort to acquaint the public with the need for limiting of service to which the public had been accustomed. The division has resorted to display advertising to explain the several rulings instituted by federal agencies, including curtailment of installment buying, men's clothing rulings, and all other war programs which have altered the services originally expected by the buying public.

The Board of Governors has authorized a special committee entitled "To Cooperate with City, State, County, and Defense Agencies in the War Emergency." This committee's first project is the study of the possibility of staggering hours, and its first effort in this direction was to secure a change in the opening hour of the schools, so that mass transportation would be relieved of a double load of office workers and school children. The committee stands ready to lend practical help to all agencies calling on it.

The Better Business Division has investigated many solicitations in which the promoters base their appeal on patriotism. Many such schemes have been found wanting, while others with solid background have received the Chamber's full cooperation.

With nearly 75,000 members of the military service in the Jacksonville area, our Military and Naval Affairs Committees have done outstanding jobs in assuring perfect public relations between military and civil life. That they have succeeded is indicated by the fact that no untoward event has occurred during the past eighteen months to mar this friendly and cooperative relationship. During all these months no soldier or sailor has been placed on the police blotter for the infringement of a minor law. In cooperation with the local police department, such offenders are turned over to the military police or shore patrol for proper disciplining by their commanding officers.

Every feasible and possible effort has been made to bring each productive facility in the Jacksonville area into the war program. Working with all shops in the city, we have made attempts and have succeeded in correlating the efforts of many small establishments with those of large firms holding basic war contracts.

WILLIAM S. JOHNSON,
General Manager.

How a Revitalized Chamber of Commerce Is Functioning

WILMINGTON, N. C.—Twelve months ago, the Wilmington Chamber of Commerce was reorganized, refinanced, and revitalized. Its "three R" program was completed a little more than seven months ago. Already the organization has more than justified, in the Nation's war effort alone, the increased interest, manpower, and funds which went into the ambitious program.

As the government geared its defense machinery for vastly increased production, the Wilmington Chamber of Commerce set about to secure a substantial quota of business for the eastern North Carolina city's industrial enterprises. The defense service set up by the organization has resulted in substantial contracts.

In launching its program, the Chamber made a minute survey of the industries in the area. The findings were placed in the hands of proper governmental purchasing agencies, holders of prime contracts, and holders of substantial subcontracts.

The organization sent a representative to attend defense industry clinics; got in touch with every agency having to do with defense buying; and it subscribed to all journals giving information on contracts. As rapidly as items which might fit into the local picture were found, the Chamber of Commerce advised local industrialists and urged them to bid. In many cases it even assisted the prospective bidders in filling out their bid forms.

The program was not long in producing results. The first sizable contract in which the Chamber figured was for more than $65,000 worth of sand-bags. Right now that particular manufacturer has contracts for all the sand-bags he can manufacture.

Defense contracts and subcontracts and the increased tempo of war production efforts generally have brought other avenues of wartime service into the Chamber of Commerce sphere—among them priorities. The Wilmington organization has kept abreast of the important priorities picture. Located a considerable distance from the nearest WPB office, the Chamber is being called upon to serve as sort of an official priorities office.

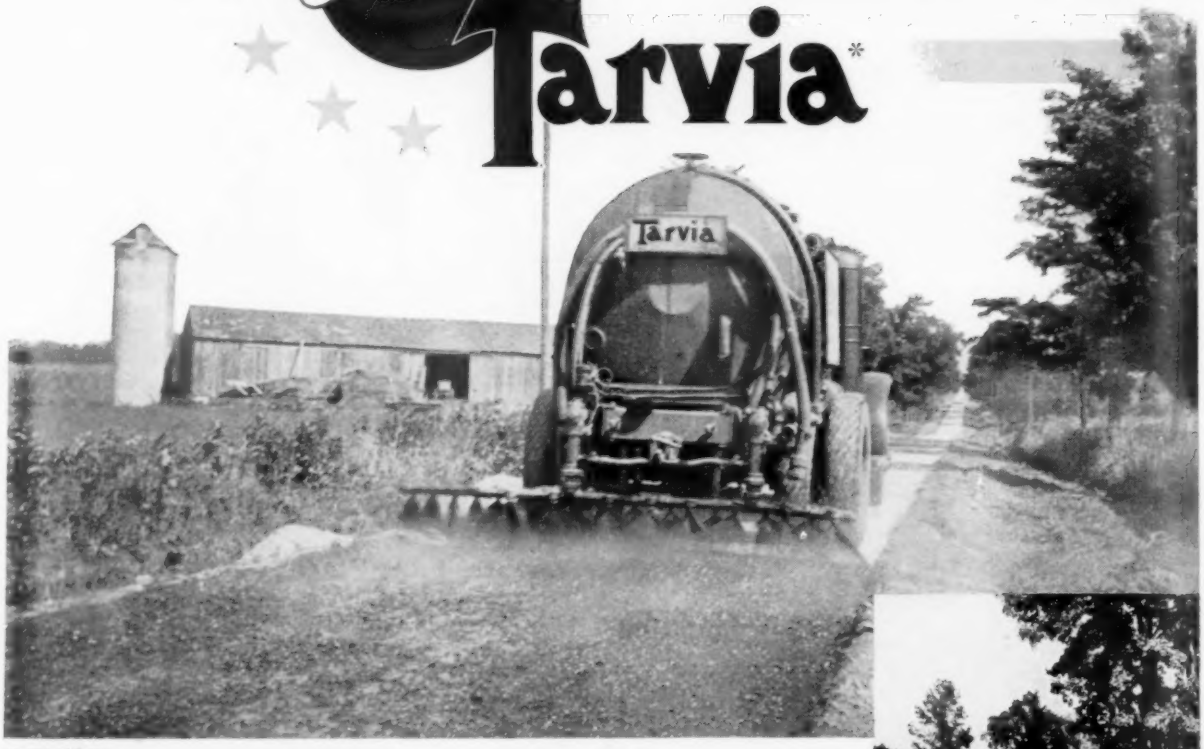
Wherever possible, priorities forms are made available in the office. Perplexed citizens are given assistance in filling out these forms. New regulations are explained. Holders of priority ratings are taught how to extend them. The Chamber of Commerce is keeping right on its toes in this field too, sending its representative to priority clinics, subscribing to journals giving priority information, and maintaining constant contact with the War Production Board.

Wilmington is in an area designated critical for national defense. Its many war industries include a huge shipbuilding plant. Army and Marines camps are located nearby. Many thousands of new families have come here to live. Housing and other problems have come as a natural consequence, and in all of these the Chamber of Commerce has played an active part.

Wilmington is a coastal city and its vulnerability makes the work of its Civilian Defense Council exceedingly important. This program has found prompt and enthusiastic cooperation by the Chamber of Commerce.

In addition to doing yeoman service in the nation's all-out war effort, the Wilmington Chamber of Commerce continues to perform its regular func-

Barrett Tarvia*



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IS THE WATCHWORD FOR AMERICA'S ROADS

WHILE America's first responsibility is to build more and more planes, ships and tanks to win the war, new road construction will necessarily be limited by military requirements . . .

But not so maintenance!

Now and for the duration, "stitch-in-time" road work is more important than ever. It is soundly economical, vitally necessary . . . not only for strategic, cross-continent highways, but also for the equally important farm-to-market roads that are the backbone of our highway system.

For nearly 40 years Tarvia* has been helping highway engineers get the most out of available highway funds. This versatile paving material is being used with outstanding success to extend the life and service of all types of highways. It is annually saving taxpayers heavy replacement costs.

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tions successfully. It is already tackling the Gargantuan task of endeavoring to "cushion" against the rigors of war's end. To this end it has created a Post-War Planning Committee to serve indefinitely, and this group of outstanding businessmen is developing a well-charted course.

These are some of the ways in which one Chamber of Commerce is facing its new and war-made responsibilities.

JOHN L. MORRIS,
Executive Secretary.

Before and Since Pearl Harbor

CINCINNATI, OHIO.—Long before the outbreak of the war, the Cincinnati Chamber of Commerce was devoting a large measure of its effort to helping its members and business generally meet the problems arising from the changed emphasis brought on by the preparedness program.

Since Pearl Harbor, the Cincinnati Chamber has multiplied its activities in connection with the war effort.

It has provided executive direction, clerical help, and office space to the Civilian Defense program.

It has helped set up and get into operation the rationing machinery for Hamilton County.

It keeps its membership advised through bulletins of the War Production Board and Office of Price Administration orders, listing all orders and explaining their intent.

It has worked closely with the Army Ordnance Office, the War Production Board, and the Naval Contract Distribution Division in efforts to ease the shock of conversion from peace to war-time operations.

It has worked steadily with industrialists toward solving some acute problems which have confronted them as a result of the extraordinary demands of the war, and its officers are confident that one crisis involving the industrial underground water supply soon may be solved satisfactorily.

Because of the concentration in Cincinnati of procurement and administrative offices of the Army, Navy, WPB, and OPA, the Chamber has not found it necessary to set up duplicate facilities. Instead, it has pointed its efforts to the educating of manufacturers and commercial concerns to the presence of those agencies in Cincinnati, and has emphasized the desirability of taking the utmost advantage of their presence.

The already well-balanced economy of the city has prevented abrupt, widespread dislocation in the conversion to war production. So, it has been possible to handle such situations as they arose on a day-to-day basis.

MORRIS EDWARDS,
Executive Vice-President.

City Planning Agencies Comprehensively Surveyed

RESULTS of the most comprehensive survey of city planning agencies yet made in the United States are reported in the 1942 Municipal Year Book, to be published this month by the International City Managers' Association. All but two of the 412 cities of over 25,000 population submitted at least some of the data requested.

A total of 301 cities, or 73.4 per cent of those reporting, have planning agencies, including 6 cities that have only zoning boards or commissions. The percentage of cities with planning agencies varies directly with the size of the city. Each of the 14 cities over 500,000 population has a planning agency (at least on paper), while only 64.2 per cent of the cities between 25,000 and 50,000 population have established such agencies.

Inadequate Funds

The Municipal Year Book comments that:

"About 60 per cent of the city planning agencies have one or more ex officio members. The city official most often included as an ex officio member is the city engineer (101 cities), and in another 41 cities the director of public works, or his equivalent, is included in the planning agency membership. In 98 cities the mayor is an ex officio member, and in 45 cities the city council has one or more of its members serving as ex officio members of the planning body. Other municipal officials who are ex officio members and the number of cities are: director or superintendent of parks, 36 cities; city manager, 24 cities; city attorney, 22; building commissioner, 14; city clerk, 7; and finance officer, 7.

"In about two-thirds of the cities, appointments to the planning board are made by the mayor, and in about 20 per cent of the cities by the council. It is interesting to note, however, that in at least 16 cities the city manager is the appointing officer, which indicates that in these cities, at least, the formulation of plans is recognized as being inseparately related to the administration of municipal activities.

"If one were content merely to count the city planning agencies in existence he would find the figures very encouraging, but a more discriminating analysis reveals that a very large share of these planning agencies have little or no funds and entirely inadequate technical staffs. Because of the very great range in expenditures—from nothing up to New York City's $256,000 budget—it is not feasible to present any summary or average figures on finances, but some comparisons of staff appear to be justified. The planning agencies in 80 cities report "none" for 1941 expenditures, and the planning agencies in another 80 cities spent less than $1,000 in 1941; thus over one-half of all planning agencies (53 per cent) in cities over 25,000 population do not have a budget large enough to have a full-time employee.

Inadequate Staffs

"It seems reasonable to assume that few cities over 25,000 population can do a competent planning job without at least one employee devoting full time to planning. (An exception might possibly be made for the 27 cities reporting annual contracts with planning consultants.) Less than one-fourth of all cities over 25,000 (22.4 per cent) have full-time planning staff members, and in the 25,000 to 50,000 population group only one out of 13 cities (7.5 per cent) has a full-time staff member. It is difficult to summarize or appraise the figures on part-time employees because the amount of time they spend on planning was not reported. In most cases they are full-time city employees (engineers, draftsmen, clerks, etc.) who devote part of their time to the work of the planning agency. In a few cities, of course, the amount and the quality of the planning work done by employees of other city departments may result in a higher level of planning than would be suggested by the size of the planning agency's staff."

Limited Concept

"A total of 342 cities (83.4 per cent of all reporting cities) have enacted some type of zoning ordinance, and 294 of these cities (71.7 per cent of total) have comprehensive zoning ordinances. The other 48 cities have partially complete zoning ordinances as follows: 17 cities have use regulations only, 14 cities have area and use regulations, 13 have area regulations only, 1 height and area, and 3 have interim zoning ordinances.

"Although some reservations must be made with respect to the quality of these zoning ordinances, it is nevertheless interesting to note this further evidence that city planning to date has been most concerned with zoning problems. It is no slight to the importance of zoning regulations to observe in conclusion that this attention to zoning is probably not so much an evidence of planning progress as it is a commentary on the limited concept of city planning that still prevails in many communities. Despite the high percentage of cities with zoning ordinances, discriminating students of city planning will find more encouragement in the growing number of planning agencies with relatively adequate funds and personnel, for only with a foundation of careful, continuous planning can zoning ordinances be regarded as manifestations of true planning progress."

Flag Photographs Wanted

If your city has a particularly striking photograph showng an American flag flying over your City Hall or other public place, THE AMERICAN CITY would be glad to have such a picture for possible reproduction on a front cover or otherwise.

When mailing photographs, please identify on the back as to city and source, and mail to 470 Fourth Avenue, New York.

"The A-W Patrol Sweeper Surpasses Our Expectations at the Time of Purchase. It Not Only Sweeps Clean But Accomplishes in a Day What Formerly Took Many Days."

A-W PATROL WINS A SWEEPING VICTORY

THE **Austin-Western** PATROL SWEEPER

FOR MONMOUTH ILLINOIS

● 5000 trees, which line Monmouth's sixteen miles of paved streets, once made every heavy rain a street-flood hazard . . . as accumulations of twigs and leaves blocked storm sewers. With 200 blocks frequently yielding 14 truck loads of debris . . . to say nothing of the fall leaf problem . . . the Street Cleaning Department was constantly behind the eight ball.

But the purchase of an A-W Patrol Sweeper turned the tide of Monmouth's battle for clean streets. Traveling at the rate of 300 to 500 feet a minute, it keeps all paved streets so clear of sewer-clogging dirt and litter that heavy downpours now drain off rapidly and completely.

Whether your streets are smooth, rough, uneven or irregular, the A-W Patrol will scour, dig out and pick up all manner of debris. It sweeps right up to the curb. Reduces costs as well as flood and traffic hazards. Communities which formerly required six men to sweep the business section once a week and the residential section twice a season, now cover every paved street in town once a week and the business section several times a week with one man and an A-W Patrol Sweeper.

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Tackling the Tax-Delinquent Land Problem

DISPOSITION of urban tax-reverted property according to sound land-use planning principles has been the object of a successful project recently carried out in northern Michigan. The following is a summary taken from an account of the project in "Urban Land-Use Programming in Northern Michigan," a publication of the Michigan Municipal League.

As a result of the operation of Michigan tax laws during the past decade, approximately 20,000 parcels of property located in 141 cities and villages in the northern 47 counties of the state reverted to the state of Michigan in November 1939, for nonpayment of taxes. In addition, 2,217,000 acres of rural land also became state owned at this time. An Act of 1937 authorized the Department of Conservation to administer this property, which, when added to the existing holdings of the state, brought approximately 22 per cent of the land area of the 47 counties under state ownership.

The Conservation Department was given the opportunity to determine the proper land use of such property in accordance with the public policy, which is characterized as being that which is best to the interests of the state—a provision sufficiently broad to include the political subdivisions thereof. The Department was empowered by statute to reserve such property as was needed for public use; to deed property to municipalities—including cities, villages, townships, school districts, and counties—for municipal purposes; to withhold land from sale; and to appraise and sell such lands as in the discretion of the department were fitted for private ownership.

The urban property represented a large number of descriptions of no value to conservation projects and presented a problem the magnitude of which exceeded any which had previously confronted the Department. The subject was of intense interest to all municipalities in which reversions had occurred, but it was unfamiliar to most municipal officials, particularly in the small towns.

To assist the cities and villages to become familiar with the state-owned lands within their boundaries, to study the procedure through which such ownership occurred, and to make recommendations intelligently for disposition and utilization of such lands, a project was undertaken with funds made available by the American Municipal Association through the Michigan Municipal League, to which were added monies from Department of Conservation appropriations. A contract was written with the State Board of Vocational Education for the instruction of municipal officials in this area, 75 per cent of the expense of instruction being later refunded by the State Board to the Department.

Two series of group meetings were held in 20 localities in the northern part of the lower peninsula and in seven areas in the upper peninsula, at which time the instructor reviewed the problem, outlined the steps in tax reversion of property, distributed a list of the reverted parcels in each municipality, explained steps to be taken in recommending disposition of the property, and discussed general aspects of land-use planning.

More than 400 officials attended each of the series of conferences, and nearly all of the 141 municipalities in the area were represented. To date 111 cities and villages have submitted plans, and approval of the Conservation Department has been granted to 101. These have covered 18,525 parcels of land, 2,936 of which have been deeded to municipalities, 250 to schools, 13 to churches, and 4 to counties and townships. Cities and villages requested that 3,868 be withheld and 73 have been exchanged with private individuals. The remaining 11,381 have been or will be offered at auction at recommended minimum prices. Following is an analysis of proposed uses of parcels of state-owned property deeded to municipalities from December 1940 to October 1941:

Park and Recreational	834
Recreational	168
Streets	189
Water System	92
Sewer System	29
Parking Lot	53
Building	50
Parks and Forestry	287
Forestry	315
Clay and Gravel Removal	31
Market and Parking Lot	60
Storage	23
Garden	67
Airport	382
Dumping Grounds and Park	287
Animal Pound	2
River Beautification	7
Cemetery	55
Docks	5
Total Parcels	2,936

The program will be a continuing one with municipalities making recommendations to the department concerning future reversions. Lists of parcels reverted in 1940 have recently been sent out to the cities and villages in the area and already 25 have submitted their plans concerning these reversions.

The administration of state-owned property can probably be handled better under a single policy by the state than through any other method, and yet at the same time the problem is an individual one with which the community in which the property is located is best able to cope.

The land-use program as worked out by the Department of Conservation and the League is an attempt to find a satisfactory procedure for dealing with this dual problem. Its success or failure will depend on the degree of interest shown in the future by the municipalities and by the Department of Conservation. Michigan has sufficient statutory authority to provide for its continuation, and at present the program is operating to the satisfaction of both the municipalities and the state.

Financing Expanded Municipal Activities

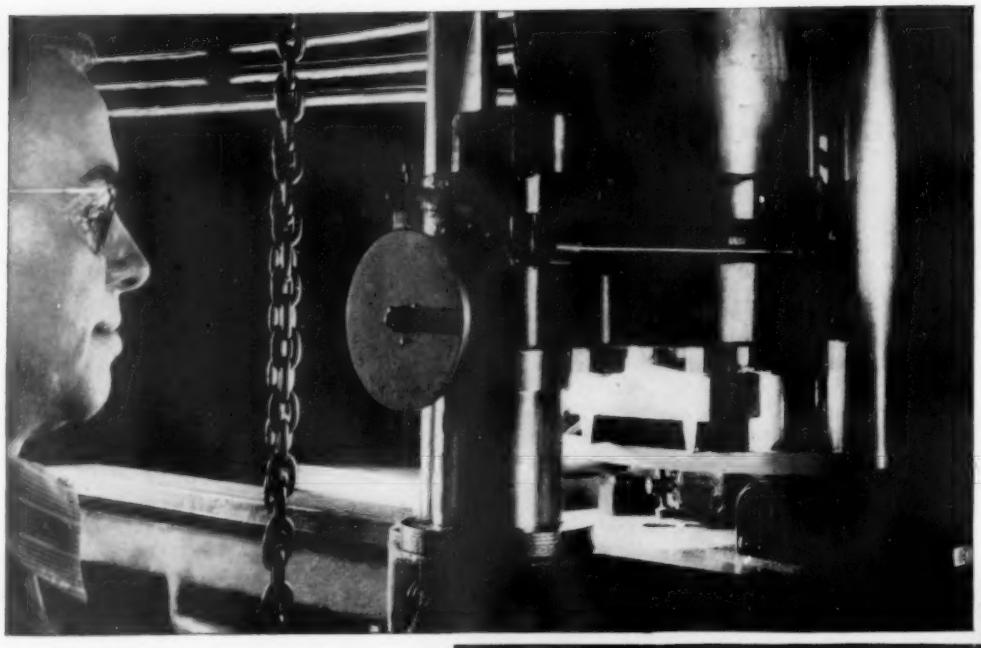
A RECENT mimeographed report of the League of Wisconsin Municipalities* discusses some of the problems confronting cities, villages, and towns in areas to which the war program has brought rapid population increases. In such municipalities, the report points out:

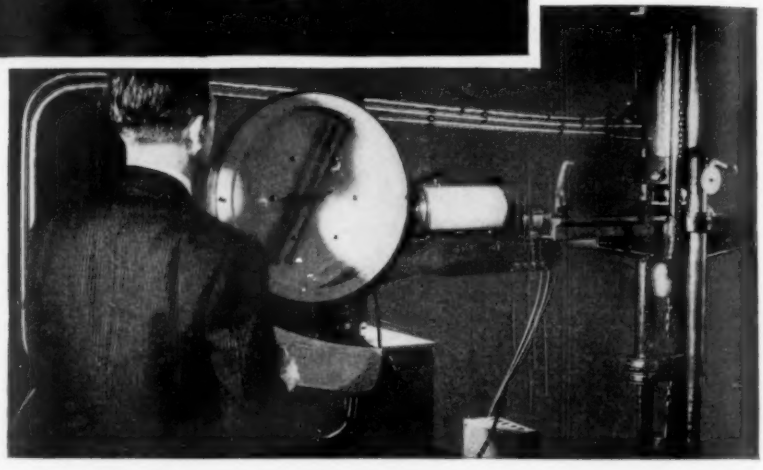
"It is not reasonable that the major share of the cost of furnishing police and fire protection, sewer and garbage service, schools and libraries, and the many other governmental services that will be required by newcomers to the community, should be paid for by permanent residents. There are several possibilities of using other means of financing expansion of local services."

The report then discusses the following possible sources of municipal finances, with a paragraph or two under each heading: federal community facilities aid; increased assessed valuation of benefited properties; trailer residents; transient merchants; regulatory fees; license fees; traffic fines; parking meters; service fees; school tuition; highway aid; occupational taxes and other revenues.

Other sections of the report discuss Municipal Planning; Public Safety; Housing; Health and Sanitation; Highways and Traffic; and Education.

* 30 East Johnson Street, Madison, Wis.





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Developing Constructive Citizen Interest in City Planning

By Marshall Stalley
Secretary, Association of Community Councils, Pittsburgh, Pa.

LOCAL community councils are located in 14 different neighborhoods in Pittsburgh. They are all similar in their composition, but their interests and activities vary, of course, from one group to another, depending upon the character of the particular neighborhood and its special problems. Basically, however, the groups are the same in that they include citizens who come together, neighbor by neighbor, to plan for improved community life. Community Councils are non-political in their point of view and non-racial and non-sectarian in their membership.

To work out local community plans in relation to city-wide planning needs, the community councils have formed an Association of Community Councils. This group includes delegates from the individual community councils together with certain delegates-at-large. For example, the Executive Secretary of the City Planning Commission is a delegate-at-large to the Association of Community Councils. This relationship was established to give support to the official plans and recommendations of the City Planning Commission and to prevent the plans of the local community councils from conflicting with sound city planning.

To Illustrate

Early in May, 1941, City Council (by a vote of eight to one) passed an ordinance which would change certain zoning ordinances in the Hill district (a blighted area in Pittsburgh located between the Golden Triangle and the East End) from "commercial" to "heavy industrial." Such changes would permit a junk yard to be located in the immediate vicinity of the new Terrace Village Housing Projects of the Pittsburgh Housing Authority and across the street from a new huge elementary school, the A. Leo Weil School. Such developments as the housing and school program are rehabilitating a blighted area into a residential neighborhood. They are developments which have had the full support of the Hill District Community Council (the community council located in this particular area of Pittsburgh). Consequently, the Association of Community Councils opposed this action made by City Council which we considered an example of "spot" zoning. The appeal was made to the Mayor that the ordinance be vetoed. Members of the community council who live in the vicinity of the area under consideration wrote supporting letters to the Mayor. In this way we believe we were, in part, able to answer the pressure coming from "political quarters." On May 16 the Mayor vetoed the recent action of City Council, and no attempt was made by the Council to pass the bill over the Mayor's veto.

Other activities could be mentioned. When the new Bedford Dwellings Housing Project was constructed on the site of the old Ammon Playground, the city agreed to replace this playground with one equal or larger in size. A contract was entered into between the City of Pittsburgh, the City Planning Commission, and the Pittsburgh Housing Authority to this effect. However, City Council did not move on this matter, and the housing projects were built but not the new playground. Consequently, it was necessary that the Association of Community Councils hold a series of hearings before City Council to urge that Council pass the necessary enabling legislation releasing funds to provide for the construction of this new Ammon Playground. Committees of the community councils met with the Director of the Recreation Bureau and the Works Department to urge that the recommendations of the City Planning Commission for the construction of the new playground to replace the old one be adopted. Plans had all been completed and approved. The contribution of the community councils was to see that they became realities. Following a series of hearings and conferences with public officials, the Association of Community Councils held a hearing with the Mayor. The Mayor agreed to give his full support. City Council acted by passing the necessary enabling legislation and the work began.

With the development of the new Hill district housing projects to house 3,000 family units, the need for increased educational facilities became apparent, and Community Councils were anxious to see that such facilities be planned to meet the community's needs. Committees met with school officials to review these plans during their developmental stages. Particular emphasis was placed on planning facilities in this new elementary school for community recreational activities. Definite assurances were given to Community Councils that such facilities would be provided.

During these conferences one gap became apparent — the need for a community library. Original plans of the Board of Education called for a school library, but no library room to meet adult and community needs. At this point the Carnegie Library offered to staff and operate such a community library if the Board would provide the facility. The Council suggested it be planned in such a way to be directly accessible from the outside. This would prevent the use of the community library from interfering with the regular school activities. The School Superintendent agreed to bring this proposal before the Board of Education at its regular meeting. Community council support was given to the plan at this time. Despite the fact that the revision would cost the Board an additional $5,000, it was approved by the Board of Education in April.

Another Example

The city has been faced with the problem of what to do with merry-go-rounds in city parks which have become obsolete, and which have been found very expensive to operate in view of rather limited use by children. Community councils have studied the existing park facilities and programs and recently recommended that one of these merry-go-rounds be converted into a much-needed shelter house for use by picnickers, day campers, and other recreational groups. Three local community councils located in the vicinity of the city's Riverview Park jointly supported this plan and received the support of the Association of Community Councils as a whole. In the past, City Council had considered such a move but met with resistance from these neighborhoods because of certain sentimental attachments to the merry-go-round idea. But because the community councils, prior to the hearing before City Council, had carried out an extensive educational program throughout the area, this time the plan met with no community resistance. Consequently, City Council now felt that it was not only "good planning," but, likewise, "politically expedient" to release funds for capital improvements in this park calling for the rehabilitation of the abandoned merry-go-round for use as a shelter house and adult recreational building. In May such action was taken.

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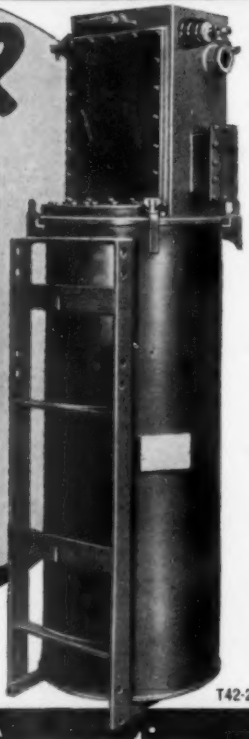

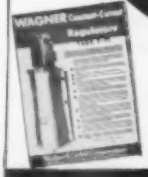

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Traffic Control and Facilitation

Conducted by Traffic Control & Facilitation Committee, Institute of Traffic Engineers, 60 John St., New York

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Handling War Traffic

By 4 Experienced Traffic Engineers

Traffic Engineer of a large Eastern city, concerning the elimination of parking, more one-way streets, and staggered hours as a means to facilitate traffic control on existing streets and highways:

TO facilitate the movement not only of war materials, but also of mass transportation, fire and police emergency equipment, and civilian traffic, we made a complete analysis of the primary uses of the transport system and routes being used for each purpose. We drew in colors on the street and highway map all routes taken by mass transportation, all truck lines, snow and refuse-collection routes, fire and police emergency lanes, major and minor traffic routes, parkway traffic routes, and state trunk lines and scenic routes. Study was given to the problems of possible army, ordnance, and war transport routes.

This map revealed that a priority system in scheduling engineering and maintenance activities for the improvement of traffic flow would have to be made. The traffic system was coordinated.

The next step was a study of working hours of all factories, aided by the transportation committee of the local civilian defense organization.

Traffic Engineer of a Middle-Western State:

IN trying to analyze this broad subject in the light of experience on state routes, it has been broken down into the following various subheads, each of which may present entirely different problems:

Production Areas—

1. Rural—usually involving the construction and operation of new plants where none previously existed

2. Urban—either new or converted plants

Transport—

1. General—transport of materials, both raw and finished, in and out of the area

2. Employee—transport of construction workers or operation employees, or both

Experience so far has been limited mainly to problems arising from employee transport to and from production areas where new plants have been or are being constructed in rural areas. The areas contain four powder plants, bag-loading plants, shell-loading plants, and storage spaces. Each of these areas contains many square miles of former rural territory, usually miles from any densely populated area.

Surveys—

Surveys made at the beginning of development must be for current use, and be an inventory of all types of transport facilities and capacities leading into the area, together with the collection of all pertinent information which would aid in the forecast of the numerical as well as relative use of these facilities. These limits of time and scope are necessary for the short period between the acquisition of plant area and its full operation. The traffic volumes, patterns, and conditions change overnight, so that future needs must be forecast. These original surveys should give: (1) Anticipated employment within the area; (2) housing facilities and distances to plant; (3) mass transportation facilities; (4) available highway routes; (5) proposed plant entrances and parking areas.

Routing—In the plant areas located in rural territory, the peak employee transport problem has developed during construction of plant facilities, usually too late to complete the construction of additional new routes or the permanent improvement of old facilities. In the early stages of plant-area development, the need for new routes and facilities may be apparent, and plans for such construction should be made immediately. If such construction would interfere with existing facilities, it might be wise to postpone these additional routes until the transport problems have been regulated to take care of movements incidental to regular plant operation.

Applications—

1. Construction of three pedestrian over-passes

2. Use of shuttle-train service

3. Application of speed zones where needed

4. Dual-lane road construction completed or planned between three of the four areas and the nearest sizeable population center

5. Objectionable parking practices removed either by parking prohibitions or regulations

6. Traffic signals installed, with provisions for manual control to facilitate peak movement

7. Special signs and markings installed

8. Periodic contacts with plant and police officials in order to provide for changing conditions

Traffic Engineer of a large transit company in an Eastern city:

WORKERS get to the downtown area as follows: 47 per cent by mass transportation; 36 per cent by automobiles or taxis; 17 per cent walk. Since the beginning of the national defense program, transit patrons in the morning rush period have increased 50 per cent, while off-peak traffic has increased approximately 25 per cent.

With the gradual disuse of auto and taxi, it is estimated that 80 per cent of present workers in the downtown area will rely on public transportation.

While there has been a corresponding increase in traffic to date, the effect of tire rationing begins to be felt.

Factors to Consider—

Analysis of bottlenecks on rail and bus systems. Special attention must be given to track capacity on street-car systems, as otherwise the inherent value of system may not be utilized fully.

Methods to consider—

Modification of loading standards:

Reroutings—(1) where possible, by-pass congested area; (2) short end trips before reaching bottleneck; (3) diversion of trips to balance track capacity

Extension of tracks where improved use of system will result

Elimination of home-to-office routings and encouragement of great use of transfer where improved traffic congestion and savings in equipment will result.

Skip stops; review of location of stops; provision of loading platforms for street-cars. All these are conducive to greater transit speed and capacity.

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Prohibition of stopping or standing of automobiles against curbs on designated thoroughfares has increased the capacity of these streets.

Lengthening of curb radii at intersections and setting back of curbs opposite loading platforms increase street capacity.

Staggered hours bring great relief.

With the elimination of private automobiles as a large factor in providing service for workers, increasing attention should be given to the following suggestions for retiming traffic lights:

Elimination of lights no longer warranted by lack of cross traffic

Reduction of length of cycle and *redesign* in offset to best serve the needs of mass transit

Retiming of split in division of cycle for changed traffic requirements

Elimination of multiple movements formerly warranted by heavy auto-turning movements

Institution of preferential street plan involving the elimination of through intersections on certain cross streets

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***Traffic Engineer of an eastern state,* concerning known applications of war-transport routing and other traffic-control measures within or around production areas:**

EVEN before the United States declared war, traffic congestion in the vicinity of many plants was occasioning concern. War orders had swelled the personnel tremendously; at one plant, from 2,000 for an 8-hour shift to 8,500. Since a large proportion of employees at all plants used their automobiles, conditions were becoming worse. One by one, executives of the plants and local police appealed to the traffic division.

Most plants were on numbered automobile routes or main highways under local jurisdiction. The streets adjacent to the plants were narrow, and parking made half the roadway useless to moving traffic. Parking lots were few. Cars were parked like peas in a pod on all available streets. At a typical plant, the highway became so choked with vehicles that, had occasion required, the fire apparatus could not have reached the plant. Through traffic was delayed as much as a half-hour. Problems at each plant varied with the size of the plant, its location, and the surrounding territory. In general our recommendations were:

1. *Parking*

Discourage use of vehicles by workers living within walking distance

Set up off-street parking areas

Prohibit parking on some streets and restrict it to one side and certain hours on others

2. *Street Use*

Establish one-way streets

Indicate routes for through traffic

Advise employees, where to park most conveniently

3. *Miscellaneous*

Station police at crosswalks during peak hours

Place signals on flashing operation during low periods and provide for manual operation by police during peak periods

Recommendations were made as follows: *Shipyard*—one-way streets, restricted parking, and off-street parking; *Industrial plant*—one-way streets, parking prohibitions, rerouting of traffic, and manual signal operation; *Ammunition plant*—parking prohibitions; *Industrial plant*—one-way streets, parking restrictions, painting white lines, erection of isolated stop signs, and additional assignment of police during peak hours; *Arsenal*—parking prohibitions, rerouting traffic and closing certain streets to traffic.

These are some of the applications of war-transport routing in various parts of the state. Observations at industrial plants where recommendations have been carried out show marked improvement in traffic conditions.

Cleveland Buys Its Transit System

AFTER SEVEN YEARS OF LITIGATION, THE CITY OF CLEVELAND, OHIO, has bought the transit system consisting of:

	Route Miles
22 rail routes	172.7
33 bus routes	177.9
1 trackless trolley route	4.5
56 routes	355.1

Rail routes range in length from 4.5 miles to 14.4 miles, and bus routes from 1.2 miles to 11.9 miles. Substantially all the rail routes are of the two-way, double-track type.

The equipment includes 976 rail cars, 425 motor buses, and 28 trackless-trolley buses. Rail cars include 714 motor-driven cars, 56 articulated cars, and 206 trailers.

The other properties of the company included in the sale consist of car houses, garages, and shops at twelve locations. Substantially all the present equipment, totaling about 1,600 vehicles including rail service units, is now required. In addition, the company's property includes 16 power substations with installed capacity of 54,000 kw. The company buys its electrical power from the Cleveland Electric Illuminating Co. at an average cost of 0.71 cent per kw.

The railway cars are all operated by two-men crews; buses and trackless trolleys by one-man crews. The complete absence of one-man operation of rail cars is due to councilmanic refusal (on behest of the street-railway union) to authorize one-man operation, says The Citizens League. Most large cities do have, in part at least, one-man operation which reduces the cost of operation.

The city employed the firm of Day & Zimmerman, of Philadelphia and Chicago, whose report concludes: "Based upon demonstrated past performances of the last six years, the revenues of the property should be adequate to meet the debt service requirements on the bonds and to leave a balance for other bond ordinance stipulations."

The city acquired the system by purchasing the 313,944 shares of stock at $45 per share (total $14,127,480) out of the proceeds of an issue of mortgage bonds of $17,500,000, for which the syndicate bid $17,501,946 at an interest rate of 3.74905 per cent. The remainder (about $3,000,000) of the proceeds will be used for the payment of obligations and liabilities of the company and for capital improvements.

Traffic Activity in Steel Center

THE SOLUTION OF PROBLEMS OF TRAFFIC SAFETY AND CONGESTION lies in an engineering and planning attack, say Johnstown, Pa., officials in reporting on results and future plans of the city's new Bureau of Traffic Engineering and Planning. The city is a steel-producing center of 67,000 population, with hilly topography and an irregular pattern of narrow streets.

The new traffic bureau, according to the American Municipal Association, provides for a personnel of seven—a traffic engineer, a traffic analyst, two street and sign painters, a parking-meter cashier, a collector, and a maintenance man. Duties and functions of the bureau are defined as follows, by the ordinance:

Conduct studies of traffic accidents and congestion; make periodic surveys to collect facts on parking facilities and operation of traffic-control devices; make recommendations concerning problems of city planning in its broader

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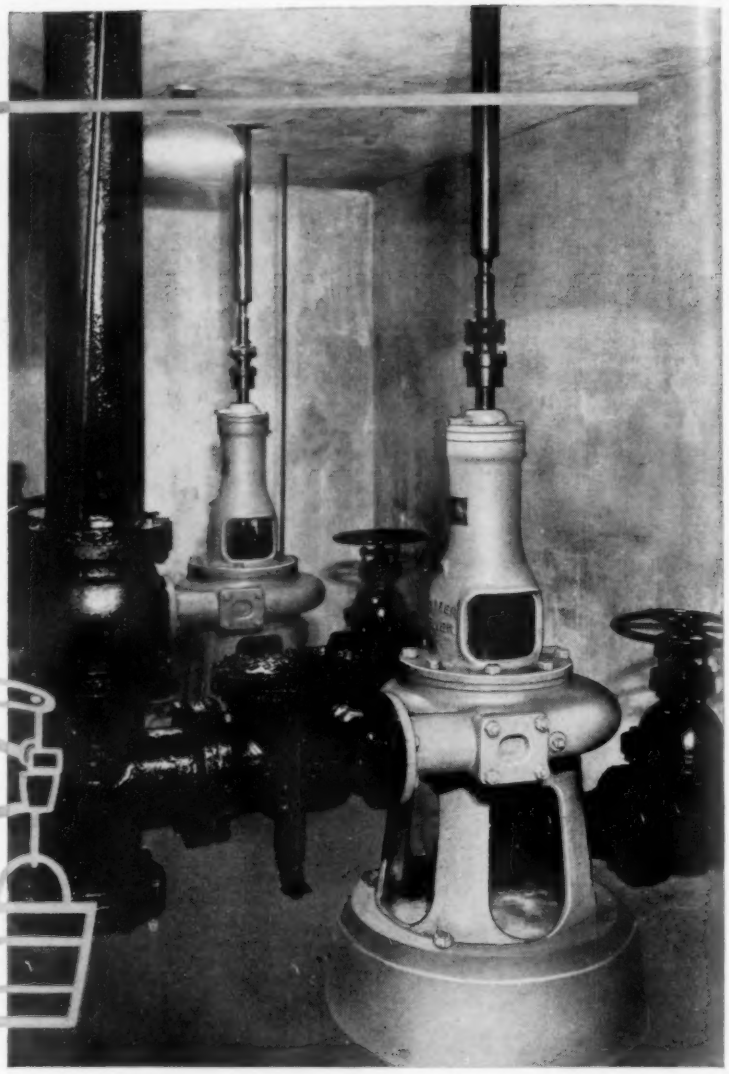

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aspects; place and maintain all traffic control devices; establish passenger and freight loading zones by permit, collect the fees for such service, and designate bus and cab stands; control parking; establish "quiet zones" and "play streets."

Placing the bureau in the department of streets and highways relieved an already overtaxed police department of the responsibility for the operation of signs, signals, and markings, and it placed the traffic engineer in an environment where he is associated with the design and planning of new street improvements which contribute to the ultimate solution of the traffic problem.

One of its first projects was to make a complete study of curb and off-street parking facilities downtown, which resulted in installing parking meters on a planned basis.

The program for 1942 provides for complete revamping of the traffic-sign and street-marking system as well as new installations on approximately half the existing traffic-signal system. The street improvement program will give Johnstown its first series of modern traffic channel islands, and the first link in a proposed arterial highway and by-pass route. Four street-car and bus loading islands are included in the spring program.

Traffic Control in a Private City

ABOUT 30,000 PERSONS have moved into Parkchester's fifty-one interrelated building units, constructed in heights ranging from 7 to 13 stories on a plot of 129 acres. Three-fourths of the land area is devoted to pedestrian lanes, landscaped lawns, and recreational areas. When fully completed in the near future, Parkchester's 12,273 apartments will accommodate about 40,000 men, women, and children.

An important aspect of the world's greatest housing project, which the Metropolitan Life Insurance Company has erected in New York City's East Bronx at a cost of approximately $50,000,000, is to have as few public streets and intersections as possible. Parkchester is divided into four informally laid out quadrants by two thoroughfares which intersect in its approximate center at Metropolitan Oval. This arrangement eliminates cross-traffic and slows down vehicles passing through the development.

Plan view of Parkchester, N. Y. C.

In the pedestrian problem, traffic and recreational facilities have all been regarded as interrelated parts. Each quadrant has itself become a self-contained community, with its own shopping districts, playgrounds, and broad, paved lanes for pedestrians and playing children.

The handling of traffic is made still less hazardous by the placement of five garages on the development's perimeter and the provision of a number of parking areas. These are approached by winding roads that require motorists to reduce speed in order to enter them. In the parking areas, which can accommodate about 1,400 cars, one-way entrances and exits and clearly indicated stalls further facilitate safe parking.

HYMAN SANDOW,
New York University.

EDITORIAL NOTE.—The various safety aspects of the Parkchester community are described in a comprehensive article by Mr. Sandow in October *Safety*, published by the Greater New York Safety Council. See also THE AMERICAN CITY for August, 1938, and November, 1939.

Continuity of Traffic Signal Service

ARTERIAL STREETS are in effect part of the assembly lines of our war industries. All traffic facilities which contribute to safe and expeditious highway transportation of men and materials should be kept in operation at full effectiveness and with a minimum of service interruptions. Hence, those responsible for traffic-signal operation may be interested in the following report of experience in East Cleveland with group replacement as a simple means of maintaining signal effectiveness and minimizing signal-lamp outages.

C. A. Carren, City Manager of East Cleveland, reports that during a full year prior to use of group replacement, 262 traffic-signal lamps burned out and were replaced individually. His estimated signal maintenance cost for the year, including two washings of lenses and reflectors, was $156.74. This amount covered the cost of lamps, labor, and trucks.

During a full year in which group replacements were made every four months, employing standard 60-watt lamps as before, there were 27 lamp failures. Replacements of these failures, plus the lamps installed in the three group replacements, made a total of 414 lamps used. The estimated maintenance cost, including three washings of lenses and reflectors at the time of the three group replacements, was $161.20.

By use of group replacement, signal-lamp outages were reduced from 262 to 27 per year, and the normal signal effectiveness was increased by three cleanings instead of two. Mr. Carran concludes: "Inasmuch as the costs were almost the same in each case, and of course the service much better in the latter case, we have decided to continue with the schedule of three regular changes per year."

Parking Meters Up to Now

ONE HUNDRED AND TWENTY-FIVE CITIES installed parking meters in their "heavy parking" districts during 1941 and the first month of 1942, increasing the total number of municipalities using meters approximately 60 per cent over 1940, according to the International City Managers' Association. Municipalities now using parking meters, numbered 347 according to the most recent survey. Two-thirds of all cities between 25,000 and 50,000 population have them. An increasing number of cities, especially small places, are installing penny meters, and 88 cities are using some penny meters. The largest cities with meters are Buffalo, Cleveland, Pittsburgh, and Washington, D. C.

Pedestrian Walk

BUILDING OF A PEDESTRIAN WALK between Mineral Wells, Tex., and a new army cantonment under construction nearby helped reduce traffic fatalities in the busy area from six deaths to none in two comparable six-week periods, says the American Public Works Association.

The pedestrian walk was built after inadequate highway facilities were blamed for a rapid accident rise accompanying the increased traffic volume. Other remedial measures put into effect were prohibition of parking along the travel way, manual operation of traffic signals at peak periods, revision of shift schedules to fit traffic peaks.

The road on which the new safety precautions were applied carries 13,000 vehicles bearing camp construction workers twice a day in addition to normal traffic.

How to save enough man hours
TO BUILD 2000 HEAVY BOMBERS

Night-time traffic accidents attributed to poor thoroughfare lighting robbed America of 206,000,000 man hours in 1941. And 206,000,000 man hours could build . . .

2000 HEAVY BOMBERS.....
or 6 BATTLESHIPS.....
or 25,000 TRAINER PLANES.....

How can "Yourtown" help to avoid this terrific loss of productive time when every man hour is so vital to Uncle Sam's war effort? Give your war workers, give all your people the protection of modern safety lighting after dark!

To help you bring your street lighting system up to war-time requirements, Union Metal offers you the benefits of its 35 years of experience in this field.

For the best standards for your safety lighting program, you can depend on Union Metal. In the complete Union Metal line of standards there's a type and size engineered to fit *your* lighting requirements . . . engineered to give you the most efficient distribution of light and the longest service life at lowest maintenance cost. Write for descriptive literature.

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Outdoor Lighting

Streets—Highways—Floodlighting

Light the Playing Fields

Excerpts from an article on "Priorities for Play" in the March 1942, issue of SURVEY GRAPHIC, *by Mark A. McCloskey, Director of Recreation, Office of Defense Health and Welfare Services, Washington, D. C.*

THIS WAR WILL BE WON BY GRIND, with the glory problematical. The grind must have its interludes. Week ends and vacations are not a sop to the innate laziness of man. They should add keenness to toil. . .

With the automobile vanishing, city transit companies and commuters' railroad lines might well develop a patriotic (and profitable) service in "cheap-trip tickets." Such excursions to the nearby and middle distant countryside seem both pleasant and practical. Advantage could be taken of slack hours between travel peaks of the working day. Customers would be available the week around, for with factories on a seven-day schedule, time off will no longer be confined to the conventional week end.

Organized groups — labor unions, civic clubs, and others—should develop cheap camping facilities, overnight shelters, or even old-fashioned summer boarding houses as a service to their members. State and county parks might do more of this for the general public.

Three-Shift Recreation

What are our other resources? What can our towns do—our neighborhoods, our families, ourselves? We can begin by making creative and imaginative use of our community recreation facilities. During the last ten years many cities have built equipment for recreation on a community-wide scale. But, like the old sundial, too many of these facilities only "mark the hours that shine." In parks and playgrounds the gates still close at dusk, though most folks have no daylight hours for play. Presumably this is a hangover from Puritan fears of philandering, to which bars and gates never put a stop anyway.

Actually the answer to the whole problem is that our parks and playgrounds need lights—dim lights along the paths, floodlights on our swimming pools, bowling greens, tennis courts, and baseball diamonds, bright lights in our school gyms and shops and reading rooms.

War or no war, night lighting of public play space is plain business common sense. This small addition to overhead would make our tremendous investment in public recreation yield double returns. In wartime it is a necessity. When factories work around the clock, recreation must suit the shifts. Its lights must go on at dusk and stay on as long as those on the production line of industry. Sport page headlines, like "Midnight Marvels Play the Dawn Patrol," give evidence that athletics can flourish at odd hours and that three-shift production must be matched by three-shift play.

Footcandles for Recreation

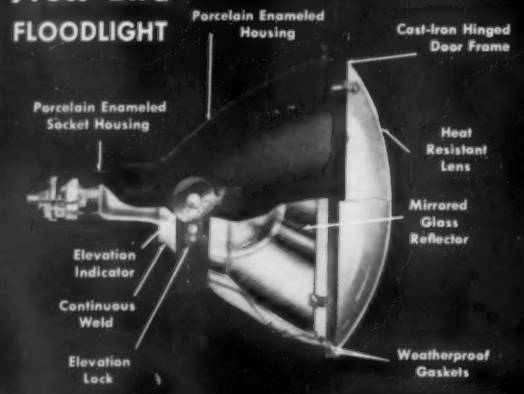
THE illumination table listed below for recreation activities is the result of recent findings and observations by the Westinghouse Lamp Division, Bloomfield, N. J. These recommendations give full weight to the improvements in old light sources, the high efficiencies of the new, and the down trend of lighting costs. These footcandle values should be provided on the areas regardless of whether in a horizontal, vertical, or oblique plane.

TABULATION

Activity	Footcandles
Badminton:	
Back Court	10
Near Net	20
Baseball:	
Seats—	
During Game	2
Before and After Game	5
Infield—	
Minor League	50
Major League	100
Outfield—	
Minor League	30
Major League	100
Baseball—Soft Ball (Indoor & Outdoor)	30
Basketball:	
Recreational	20
Exhibition Games	30
Bathing Beaches	1
Billiards:	
General	10
On Tables	50
Bowling:	
General	10
On Pins	50
On the Green	10
Boxing:	
Seats—	
During Bout	2
Before and After Bout	5
Ring—	
Amateur	100
Professional	200
Championship	500
Clock Golf	10
Croquet	5
Football:	
Practice	10
Games	20
Gymnasium:	
Locker and Shower Rooms	10
Exercising Room—Fencing, Boxing—Wrestling, Basketball, Volley Ball and Soft Ball—	
General Exercising	20
Exhibition Games and Matches	30
Handball	30
Horseshoe Pitching	10
Ice Hockey:	
Outdoor	10
Indoor	30
Motordromes:	
Seats	2
Track	20
Playgrounds	5
Polo	5
Racquet	30
Roque	5
Skating Ring (Indoor)	10
Skating (Outdoor)	5
Squash	30
Swimming Pools	10
Table Tennis—Ping Pong	50
Target Shooting (On Target)	50
Tennis:	
Recreational	20
Exhibition Matches	30
Toboggan Slides	2
Trap Shooting (On Bird at Trap)	100
Volley Ball:	
Recreational	20
Exhibition Matches	30

Supplementary information including footcandle ranges for ten grades of seeing tasks is available upon request.

New EHG FLOODLIGHT



New VEG FLOODLIGHT

NIGHT LIFE–U.S.A.

For the safety of America's new night life, we've designed a line of all-purpose floodlights which have industry-wide applications for protecting fence lines, plant buildings and outdoor production. Lightweight and weatherproof, these new units range in size from eight inches to eighteen inches.

Westinghouse Types EHG, with universal burning lamp, and VEG, with vertical burning lamp, are constructed of sheet iron. A choice of narrow beam reflector (metal-backed glass) or wide beam reflector (porcelain enameled) with various lens and lamp combinations provides a complete range of beam spreads. Both types of floodlights have graduated, locking adjustments to facilitate aiming and relamping.

Producing these floodlights and providing complete application engineering service are all-out war jobs at Westinghouse today. The nearest Westinghouse Lighting Specialist will gladly help answer your protective lighting problems, or you may write for a new *Protection With Light Planning Book*, B-2280-A. Westinghouse Electric & Manufacturing Co., Edgewater Park, Cleveland, Ohio.

Westinghouse *Lighting Equipment*

Floodlighting Plans for Sports and Recreation

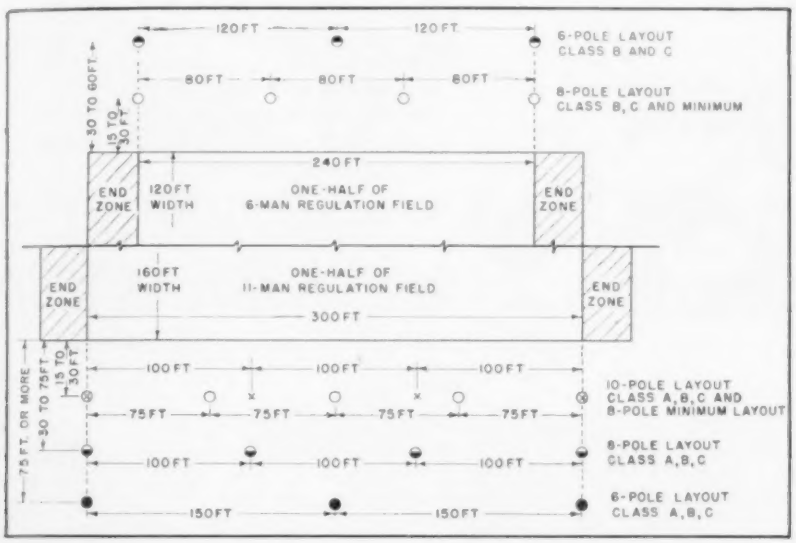
As Mark A. McCloskey, Director of Recreation, Office of Defense Health and Welfare Services, points out elsewhere in this section, a comparatively small expenditure for floodlighting recreational areas could produce benefits of measurable or immeasurable war-production value. Though the prosecution of the war per se naturally places first call on the materials and equipment resources of the country, the *spirit* with which the war is pushed, in office, shop, and field possibly has even greater results than the addition of one or two per cent to the volume of ships, planes, guns, and other armament.

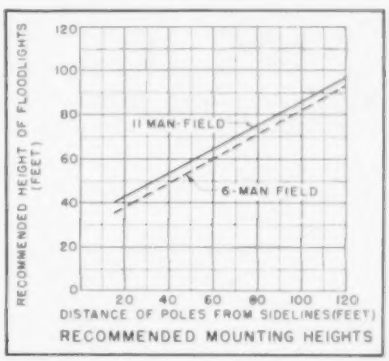
The largest unit sports-lighting system is, of course, for ball fields, and the diagrams below show the complete system for a football field. Pole locations are shown for four classes of fields: (C) accommodating several thousand spectators, (B) better than average, (A) average, and minimum. The wiring diagram, at the bottom, is for a Class C field. This arrangement is presented by the General Electric Co. in a sportslighting booklet available to municipal officials. It includes comprehensive data on how to floodlight swimming pools and tennis courts, and lighting plans for golf-driving and rifle ranges, hockey rinks, ski slopes, greens for bowling, croquet and horseshoe pitching, and shuffleboard and badminton courts.

Adjusting the floodlights is simply a matter of fanning out the beams for uniform coverage and placing the upper edges of the beams at the opposite sidelines of the playing field.

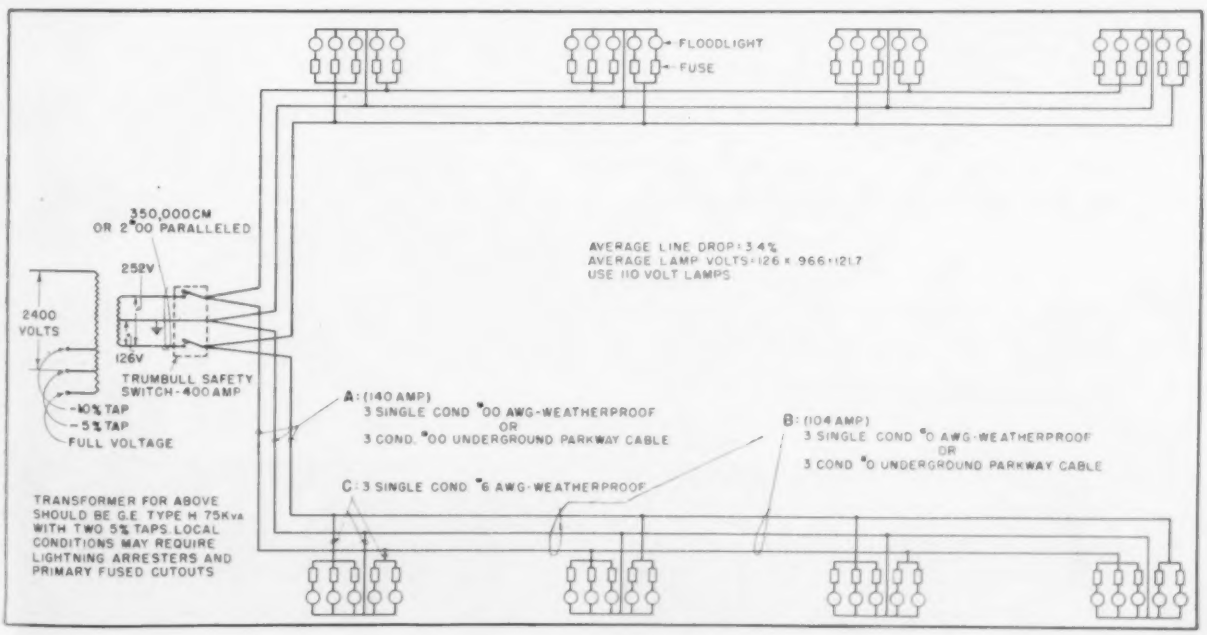
After all the floodlights are adjusted, the vertical repositioning stop which makes the servicing of the floodlight more convenient, should be adjusted. Then the units can be re-aimed easily when it becomes necessary to change their position for lamp replacement or cleaning.

It is strongly recommended that a systematic maintenance plan be established when the installation is first placed in service. This plan should include periodic cleaning of reflectors, checking of adjustments, and replacement of burned-out or blackened lamps. On the average, replacement will probably be required at the end of every second season.





At Left: suggested pole locations; Immediately Below: mounting heights; Bottom: Typical wiring 40-light Class C layout for fields accommodating several thousand spectators


FLOODLIGHT
FUSE
350,000CM OR 2-00 PARALLELED
AVERAGE LINE DROP=3.4%
AVERAGE LAMP VOLTS=126 x .966=121.7
USE 110 VOLT LAMPS
252V
2400 VOLTS
126V
TRUMBULL SAFETY SWITCH-400 AMP
-10% TAP
-5% TAP
FULL VOLTAGE
A: (140 AMP)
3 SINGLE COND 00 AWG-WEATHERPROOF
OR
3 COND. 00 UNDERGROUND PARKWAY CABLE
B: (104 AMP)
3 SINGLE COND 0 AWG-WEATHERPROOF
OR
3 COND 0 UNDERGROUND PARKWAY CABLE
C: 3 SINGLE COND 6 AWG-WEATHERPROOF
TRANSFORMER FOR ABOVE SHOULD BE G.E. TYPE H 75Kva WITH TWO 5% TAPS. LOCAL CONDITIONS MAY REQUIRE LIGHTNING ARRESTERS AND PRIMARY FUSED CUTOUTS

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Street Lighting Aids Production

By Dudley M. Diggs
General Electric Co.
Schenectady, N. Y.

I'M NOT saying that blackouts are not necessary. At times they are vital, and will be ordered by the military officials. But if we are going to have a blackout it should be 100 per cent, and for a good reason. Our main objective is production, and we cannot afford to spend production time on blackouts unless necessary.

During the period when England was experimenting with trial blackouts, casualties rose at an alarming rate. In the first month 1,130 persons were killed on British highways, compared with 554 during the same month the preceding year. By September 1941, newspapers were clamoring for reconsideration of the blackout policy, and Bristol had decided to spend £20,000 on "a brighter winter," with modified street lighting.

Our own city of Los Angeles already has had a taste of what long trial blackouts do. During the first Los Angeles blackout there were 61 injuries, 1 death, and a total of 45 vehicular collisions. The recent air raid scare resulted in 3 traffic deaths—despite the fact that it occurred at night.

Labor is the greatest sufferer in night traffic accidents. We lost 412,000,000 man-hours in 1940 due to night traffic accidents. Half of these could have been saved by adequate lighting. Those 206,000,000 man-hours might have produced 2,000 heavy bombers, 6 battleships, or 25,000 trainer planes.

The truck-traveled highways and main traffic arteries are part of the assembly line today, and trucks travel mostly at night, as do our Army and Navy vehicles.

The reduction in congestion resulting from the freezing of tires and automobiles will not necessarily reduce night-accident rates proportionately. A poorly-lighted highway *with little vehicular traffic* is likely to cause more accidents than a slippery, well-traveled one which is also well lighted.

Power requirements for lighting, to assure the safe speeding up of transportation, would be small compared with the number of vital man-hours saved. All the street lighting in the United States uses less than 1½ per cent of the generated electrical energy.

Protective Lighting Bracket

A new 20-inch right-angle-bend bracket for use in protective lighting applications has been announced by the Lighting Division of the General Electric Co. The brackets are usually mounted 22 to 28 feet above the pavement and approximately 150 feet apart.

For congested areas

Photoelectric Blackout Control

Photoswitch blackout switches such as this are located on the billboard or in the store windows which are to be controlled. They are aligned with the nearest street lamp. When this centrally controlled street lamp is turned out, this photoelectric control turns off the illumination which it is controlling. It is made by Photoswitch Incorporated, Cambridge, Mass.

Copies the street light

New Blackout Street Light

A blackout street light, which produces light equivalent to that from the flame of a single candle, has been developed in General Electric's illuminating laboratory at Schenectady for use during air raids.

Based on specifications used by the British in their blackouts, the luminaires, spaced 100 feet apart and mounted 15 feet above the street, produce a spread of light equal to starlight or 1/100 of moonlight.

The entire luminaire is painted black. In it is mounted a 10-watt incandescent lamp so concealed that the only illumination visible is through a narrow, circular piece of plastic around the side. This light cannot reach the eyes of aviators because of a projecting black canopy.

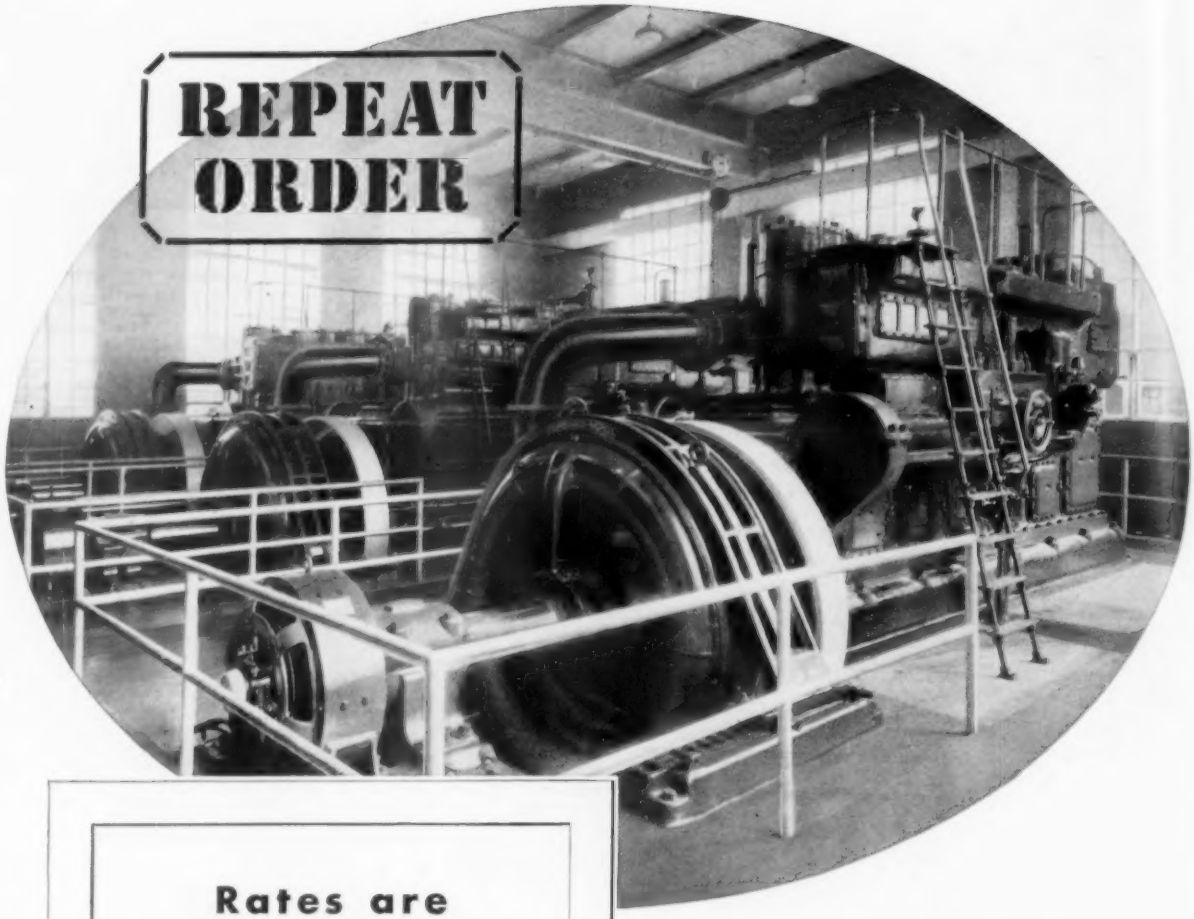
"First impression in viewing this light is that it produces no illumination at all," John E. Bock, a G-E photometric engineer, explained. "However, when the eye becomes adjusted to the darkness, persons and objects can be dimly seen at distances of 30 to 40 feet. The effect is much the same as that experienced in entering a dark motion picture theater."

Blackout Light for Municipal Vehicles

The blackout light shown here is not the same as the military-type blackout light that we are manufacturing for army vehicles. It is a civilian adaptation suitable for any make of car or truck, employing a system of two reflectors and a ground and polished lens eliminating all upward rays. These lights are efficient fog and auxiliary lights when not being used for blackout purposes. There is a three-point switch control which enables the driver to select either a normal driving light or a blackout light. As a black-out light, there is enough illumination on the road to provide for a speed of 15-20 miles per hour, yet without visibility from the air above 6,000 feet.

G. Trippe,
President, Trippe Manufacturing Co.,
Chicago, Ill.

For blackout or normal use



Rates are the third lowest in Illinois

...yet this power plant earns $26,670!

● In Bloomington, Illinois, where electric rates are bettered by only two other cities in the state, you might expect to find a power plant showing low operating profits. But the $26,670 typical annual earnings of Bloomington's municipal power plant are anything but meager. An outstanding reason for this city's low rates is found in the low total cost of operation of the city's three 750-hp. Fairbanks-Morse Diesel-generators.

Not only high efficiency but also low maintenance cost are F-M Diesel characteristics which are largely responsible for more municipal plants being equipped with these Diesels than with any other make. Of all F-M Diesels sold to municipal electric power and light plants in a recent 16-month period, 80% (by horsepower) were *repeat orders!*

If *your* community is considering installing or modernizing a power plant, it will pay you to get the full story of F-M Diesel economies, and the collaboration of F-M engineers. No cost, no obligation. Simply write to Fairbanks, Morse & Co., Dept. E10, 600 S. Michigan Ave., Chicago. Branches and service stations throughout the United States and Canada.

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When you write for that catalog, kindly mention THE AMERICAN CITY.

Planning Water Supply, Sewerage, and Other Facilities Simultaneously with War Housing

By HENRY M. PROPPER
Consultant on Community Relations
Division of Housing, State of New York

PROBLEMS encountered in selecting a site for an 800-unit federal defense housing project in the Buffalo-Niagara area have resulted in the development, in New York State at least, of a cooperative planning procedure which is being used with increasing effectiveness in all defense housing situations throughout the state. Urgent need for speed and for better local relationships first prompted this move. The new procedure has achieved these purposes to a substantial degree and is paying extra dividends by way of better integration of projects into the community and greater economy, efficiency, and coordinated development.

The 800-unit project which set these wheels in motion was to have been built by the Federal Government in the city of Tonawanda, a town of about 3,200 families just north of Buffalo. Aside from the many serious community problems involved in adding 25 per cent to the population at one stroke, there were specific questions of water supply, sewage disposal, schools, and fire protection. Housing officials from Washington discussed possible sites for the project with local municipal officials, but the federal representatives were in no position to give definite answers as to the utilities and, being pressed to get the housing job started, they were not disposed to spend too much time on collateral issues.

The results might have been anticipated. An aroused local community appealed to Edward Weinfeld, New York State Commissioner of Housing, who also has responsibility for war housing under the State Council of Defense. He arranged a series of meetings at which not only housing agencies but also the agencies having specific jurisdiction over the provision of utilities and services met around the same table with local officials from the entire area.

The solution which was finally arrived at in this instance is less significant than the procedure which grew out of it. Largely as a result of the lessons which this experience taught, it was recommended that surveys of housing needs in expanding industrial areas include investigation of all existing community facilities and that programs for government and private-enterprise construction take full account of these factors.

Scope of the Studies

This practice is now followed as a matter of routine by the New York State Division of Housing with the cooperation of the state and federal agencies concerned. Studies of impending housing needs cover not only existing available dwellings, anticipated plant expansion, in-migration of workers, and how these needs may be met, but also include complete data on available water supply, sewage disposal, schools, and other community facilities. Whatever housing programs are developed out of these investigations are the result of joint consideration not only by the state and federal housing agencies, but also by the agencies which are concerned with community utilities and services. At the same time that needed housing is programmed, plans are made for necessary extensions of water and sewer lines and plants, as well as any other services which may be required. Thus the entire program goes ahead simultaneously. The same coordinated procedure is followed when sites are selected, so that all factors are given appropriate consideration.

In all these steps local officials and community leaders now play a much more important part than formerly. This fact, together with the reassuring presence of federal representatives who can provide financial assistance for needed utilities, has resulted in a much more wholesome community attitude toward the new housing project and has speeded its progress.

City Manager Appointments

G. H. Bayles, Engineer-Secretary of the the City Planning Commission and former manager from 1923-1925, has been named acting city manager of Morgantown, West Virginia, to succeed Elmer W. Prince, city manager since December, 1933. Mr. Prince has been granted leave to become a Captain in the Army Engineer Corps.

Carl Fuehrer, manager of Milton, Pennsylvania, since October, 1937, has been appointed borough manager of Ephrata to succeed Donald F. Wagner who has joined the staff of Public Administration Service.

Everett B. Lane, manager of Marysville, Michigan, from 1922 to 1929, has been reappointed to that position.

George F. Liddle, manager of Muskegon Heights, Michigan, since May, 1933, has been appointed manager of Muskegon, Michigan.

Roy J. Miles, City Clerk of Muskegon Heights for the past nine years, has been appointed city manager of that city.

Ernest E. Lothrop, former manager of Mansfield, Massachusetts, 1922-24; Coraopolis, Pennsylvania, 1925-28; Orange, Massachusetts, 1929-33; and Supt. of Public Works at Orange since 1933, has been appointed city manager of Brattleboro, Vermont.

Charles A. Owen, who has been acting manager of South Portland, Maine, for the past few months, has received the permanent appointment.

L. E. Smith, city clerk, has been named acting city manager of Morganton, North Carolina. Chester F. Lewis, city manager since December, 1938, has been granted a leave of absence to enter the military service with the U. S. Engineers, Wilmington, N. C.

Charles S. Stevenson, city engineer, has been named acting city manager of Portsmouth, Ohio, following the death of Richard Biehl who had been serving in that capacity for the past nine months.

T. P. Tierney of Barre, has been appointed town manager of Hartford, Vermont, to succeed Richard T. Linnell, manager since November, 1940.

CLARENCE E. RIDLEY,
Executive Director, International City Managers' Association.

Municipal Bond Market

Among recent sales of new issues as reported by *The Bond Buyer* are:

Amount	Borrower and Purpose	Rate (%)	Term (Years)	Basis (%)
$700,000	Maine, Highway and Bridge	1	5-11 Ser.	.979
250,000	Sioux City, Ia., Airport	1.5	11.16 Avg.	1.45
2,000,000	Minneapolis, Minn., Refunding	1.5	1-10 Ser.	1.47
110,000	West Virginia, Road	4	1.85 Avg.	1.5387
225,000	Youngstown, Ohio, Refunding	1.75	6.5 Avg.	1.63
150,000	Wallingford, Conn., Water Dept., Issue of 1942, Revenue	1.75	11 Avg.	1.71
901,000	Cleveland, Ohio, Sewage Disposal	2.25	12.5 Avg.	2.06
2,500,000	Norfolk, Va., Water	2.40	13.5 Avg.	2.3397
490,000	Fair Lawn, N. J., School	2.80	15.33 Avg.	2.79
1,861,000	Seattle, Wash., Municipal Power and Light	2.75	5-14.5 O.-A.	2.934
690,000	Greenville Municipal Authority, Pa., Water Revenue	3	7-24.33 O.-A.	3.09
270,000	Maywood, N. J., Sewer	3.20	21 Avg.	3.18

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2—A continuous type integrator is used—eliminating intermittent integrator movement.

3—Accuracy—the float directly connects to the pen arm which assures consistently high accuracy at low, intermediate, and high rates of flow.

4—Elimination of friction producing cams and levers (it floats in water on mercury).

5—The precision machined hard rubber float is not affected by changes in temperature, nor by the type of liquid.

Movement of this specially designed float is caused by differential pressure from high and low pressure taps at Orifice plate, flow nozzle or Venturi tube. There are many varieties of Simplex type MS meters. Write today for your copy of Bulletin 52 describing in detail Simplex type MS meters.

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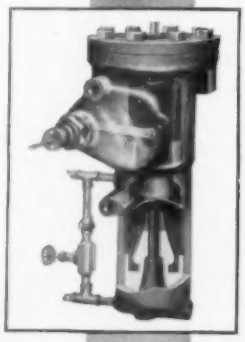

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Wartime Ideas and Activities

Cities Can Have Special Census Taken

DEFENSE centers, which have in many cases multiplied in population, have been particularly interested in the procedure outlined by the Bureau of the Census, whereby a city can have a federal census taken of its population. Following are the steps to be followed in taking such a census:

1. A formal request for the census, setting forth the reasons for desiring a special census, is addressed to the Director of the Census, Department of Commerce, Washington, D. C., by the mayor or other responsible official of the city or other area concerned.

2. An estimate of the cost is furnished by the Census Bureau.

3. There is deposited in a local bank, subject to the order of the supervisor, an amount sufficient to cover his traveling expenses, and subsistence at $5 per day for the estimated time required to take the census.

4. A regular Census employee is designated as supervisor, and upon his arrival attends to the necessary arrangements, including the selection and instruction of enumerators, the appointment of such clerical assistance as may be necessary, and, usually, the printing of the schedules. The compensation of the enumerators and other assistants is to be paid by the city or town; the salary of the supervisor is paid by the Bureau of the Census, but his railroad and pullman fares and expense allowance are to be paid by the city or town, together with the cost of printing and other incidental items.

5. The supervisor brings with him a formal agreement between the local official requesting the census and the Director of the Census, which is to be signed in duplicate, before the work of organizing the force of enumerators is undertaken.

The enumeration is conducted in a manner similar to that of the federal decennial census, except that the schedule used is usually very much simpler than that used in the 1940 census.

Commuting Community Tackles the Problem of Rubber Conservation

THROUGH the formation and functioning of a Committee on Emergency Business Policy, White Plains, N. Y.—one of Westchester County's important commuting centers with a population of some 40,000—has been boldly tackling local problems brought on by the rubber shortage.

One month after Pearl Harbor, this committee, composed of 16 representatives from as many different types of businesses in the community, went into action. As rapidly as possible, new routings for the town's trucks and other short-cuts are being put into effect. Already the city's drug concerns have cut deliveries to two a day. Eight florists in the city, heretofore operating individual trucks, are now conserving tires by the same delivery method.

The two most important findings cited by Ward Keener, a statistician of the B. F. Goodrich Co., in presenting the results of a field survey conducted by representatives of that company, are: a 20 per cent increase of business reported by the local taxi companies, and an estimate that 6,000 bicycles are in use in the city, of which 3,000 have been purchased in the past few months. Commuters in increasing numbers are pedalling to the station under their own power, and railroads have been asked to provide bicycle parking racks.

A possibility that milk companies servicing the area may "pool" on deliveries was also indicated. The plan, which is being tested elsewhere, calls for one company to deliver the milk of all local companies in certain areas.

Rerouting of such city services as garbage pick-ups was found unnecessary, a city official said, explaining that an efficient route worked out a year ago "can't be improved upon." Other city departments, however, are taking steps toward lengthening the service life of the city's rubber supplies. Recoupling, rejacketing, and relining of city fire hose has been practiced for years, a city engineer explained, but hose dryers to assure thorough drying

The Zoo Solves a Wartime Problem!

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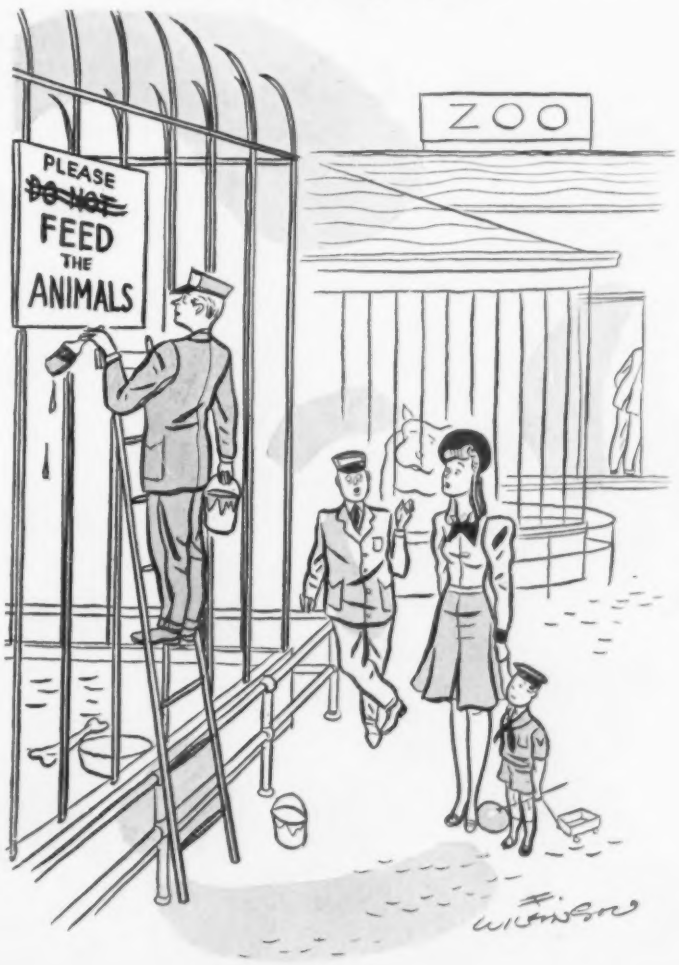

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Buy Victory Bonds with the thousands of dollars saved when you clean sewers the modern, FLEXIBLE way. Save labor for essential defense work, too.

Clean those clogged sewers now and keep them clean to protect health and property. The Home Front is important, too!

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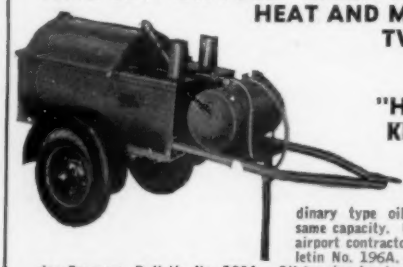

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and prevent mildew have been ordered since the emergency.

Increased "doubling up" of commuters in driving to and from the railway stations, and in taking children to school is reported, although this suburban area has long practiced the "one week you take my youngsters; next week I take yours" method of getting small fry to school. More and more teachers, however, are using bicycles.

When Soldiers or Workers Come to Town

FROM an address by Federal Security Administrator Paul V. McNutt, Director of Defense Health and Welfare Services, as one of the participants in the American Forum of the Air, directed by Theodore Granik, April 5, 1942:

What happens to the men of America's Army when they come to town? Are there places for them to play, to meet their kind of people, to sleep, to check their things? Or are they walking the streets, uncomfortably looking for something to do?

In your town—and across your town line—are there rows of cheap predatory honky-tonks and dives that shake them down for the money there is in it?

How about the thousands of new workers who have come to town with their families to man the production lines? They are turning out the munitions of war which must flow in a rapid and endless stream to Wainwright, MacArthur, Stilwell, to the soldiers of the United Nations on every front.

What is your town doing to assure maximum effectiveness of these workers and, therefore, maximum output?

And don't think that increased payrolls and higher war wages mean that they face no problems. What kind of homes have they found to live in? Are war workers in your town living in tumbledown shacks, trailer camps, or other makeshift quarters, unheated and without decent sanitation?

Are health facilities in your town—water works, sewers, health centers, hospitals—adequate to care for the needs of the many new families that have come in recent months? Or will these war workers lose thousands of days from work this year through colds and preventable illness because your town failed to solve its problems?

Remember, men at work means tanks, guns, bullets, planes. Man-days lost from work because of conditions in your town-poor housing, poor sanitation, improper food, inadequate rest and recreation—may mean the difference between victory and defeat.

It is your job to keep these men on the job.

Local Officials Aid Cooperative Planning in Hampton Roads Area

CALLED together to solve a construction crisis due to wartime doubling of the population of the Hampton Roads area in Virginia, a cooperative council of federal, state and local authorities has aided greatly, not only in stimulating rapid home construction for the area, but in sound community planning as well.

Believing that this large-scale joint planning effort may serve as a blueprint for quick action by American cities faced with war production delays, the National Committee on the Housing Emergency (512 Fifth Avenue, New York), has outlined, in an 8-page mimeographed report, the procedure adopted and results achieved.

Acting at the request of the Co-ordinator of Defense Housing, the plan was worked out by NCHE in collaboration with Hugh Pomeroy, director of the Virginia State Planning Board.

"The appropriate agencies acted to catalog existing and anticipated labor requirements, number and condition of vacancies, extent of overcrowding, emergency housing already completed, sites available, transportation to sites, and possible extension of utilities, schools, hospitals and recreational areas, and to estimate the number of dwellings needed following the emergency for permanent population increase and rehousing of slum dwellers.

"Information produced by these surveys was supplied to the Coordinator of Defense Housing for action in determining the number of houses needed, and to local officials through the State Planning Board. Working in closest cooperation, federal and local bodies prepared maps of urban development, major employment centers, facilities, drainage conditions, and other necessary factors."

The report urges the prompt creation of competent local housing authorities and planning boards, in all defense areas where such agencies do not already exist, to aid in the solution of wartime community problems.

Extent of Home Ownership in the United States

Figures released by the Bureau of The Census on April 25, 1942, show that the percentage of homes occupied by their owners in 1940 was lower than for any decennial year since inquiry as to home ownership was first included in the census. In 1890 this percentage was 47.8; in 1900, 46.7; 1910, 45.9; 1920, 45.6; 1930, 47.8; 1940, 43.6.

According to the last Census of Housing, there were 34,855,552 occupied dwelling units in the country in 1940, of which 15,196,188, or 43.6 per cent, were occupied by their owners. For urban areas that year the more widespread use of rented quarters is reflected by an owner-occupancy percentage of only 37.5.

Inter-Chamber Fire Waste Contest Awards Made

At the annual meeting of the Chamber of Commerce of the United States, in Chicago, April 27-30, engraved bronze plaques were awarded to the winning cities, in six population groups, for the best accomplishments in fire prevention and protection in the annual Inter-Chamber Fire Waste Contest:

More than 500,000—Milwaukee, Wis.
250,000-500,000—Cincinnati, Ohio
100,000-250,000—Wichita, Kan.
50,000-100,000—Lakewood, Ohio
20,000- 50,000—Parkersburg, W. Va.
Less than 20,000—Valley City, N. Dak.

Foundations for Peace in Time of War

THIS is a war so arduous and so difficult that it can only be won by a united people, by a people who know that the civilization for which they must be ready to die is, in truth, worth dying for. That is why in England the last two fateful years have seen no retrogression but the most outstanding progress in all the public social services—in insurance benefits, in hospitalization, in child care. The magnificent endurance, the unshaken loyalty of the British people is, in no small measure, the result of this national policy.

Furthermore, even if we could win the war by sacrificing our basic social ideals, the achievement would be of doubtful value. This is not a war between nations for territory or prestige. It is a war between two philosophies of living. We are fighting the forces of hate and selfishness and injustice not only in Nazi Germany but also in all the nations of the earth, including our own. As Edna St. Vincent Millay has reminded us recently in a noble poem, we must kill the dragon in such a way as "not to be spattered by his blood." We must defeat Germany and Japan and we must at the same time go forward with the building of a world of better opportunity for our own people and for all mankind.—C.-E. A. WINSLOW, Dr. P.H., in *Survey Graphic* for March, 1942.

Dear Pop:

Even an old Rainbow Divisioner like you would pop your eyes at the army we're putting together this time. Let me tell you, they're doing everything to make up just about the best bunch of fighting galoots you ever saw.

And that goes for what they do for us off duty, too! Take this new clubhouse we got just outside of camp. It's got radios, dance floors, nice soft chairs and everything. And, Pop, you can get something to eat that won't cost you a month's pay!

Now, the army isn't running this. The USO is. And most of the other camps got USO clubs too, because you and a lot of other folks dug down and gave the money to the USO last year.

But, Pop, you know what's happened since then. Guys've been streaming into uniform. Last year there was less than 2 million of us. This year there'll be 4 million. And the USO needs a lot more dough to serve that many men—around 32,000,000 bucks I hear.

Now, Pop, I know you upped with what you could last time. But it would sure be swell if you could dig into the old sock again. Maybe you could get some of the other folks in the neighborhood steamed up, too.

It will mean an awful lot to the fellows in camp all over the country. Sort of show 'em the home-folks are backing them up. And, Pop, an old soldier like you knows that's a mighty nice feeling for a fellow to have. See what you can do, huh, Pop?

Bill

GIVE TO THE

USO

Send your contribution to your local USO Committee or to National Headquarters, USO, Empire State Building, New York, N. Y.

Prepared by
FRANK B. WILLIAMS
Author of "The Law of City Planning and Zoning"

Zoning and Planning Notes

With the cooperation of
EDWARD M. BASSETT
Author of "Zoning" and of "The Master Plan"

Billboards

FLORIDA.—*Hav-A-Tampa Cigar Co.* v. *Johnson*, Chairman of State Road Department, Supreme Court, December 19, 1942, reported 5 So. (2d) 433.

A statute of the state provided that no advertising sign or structure should be operated or maintained within 15 feet of the outside boundary of a public highway. The cigar company erected and maintained such signs. The court sustains the constitutionality of this statute. A purpose of the statute is to prevent the attention of drivers of rapidly moving vehicles and others on the public highway from being distracted. Such signboards increase the hazards and risks of public travel on the highway.

Two judges dissent. One judge concurs, specially on the ground that although such signs are not necessarily a hazard the statute should be upheld on esthetic grounds, and the case of Anderson v. Shackelford, 74 Fla. 36, to the contrary, should be overruled.

In accord, Swisher and Son, Inc., v. Johnson, Supreme Court, December 19, 1942, reported ib., p. 441.

Zoning Ordinance—Mechanic's Liens

ILLINOIS.—*Wolthausen* v. *Leiterer*, Appellate Court, January 14, 1942, reported 39 N. E. (2d) 71.

A village zoning ordinance, prohibiting the erection, alteration, or use of buildings except for single-family dwellings in a certain district and providing that no building shall be altered until the building commissioner issues a certificate that the proposed altered building complies with the building ordinances and that no permit shall be issued to make a change not in conformity with the ordinance, applies to the furnishing of materials for the erection or alteration of the building, as well as the workmen erecting or altering it.

Lumber companies furnishing lumber for use on land to its lessee, who said that she bought the property, were not excused from inquiring into what use was to be made of the lumber and the legality of such use. Such companies were charged with knowledge of the village zoning ordinance prohibiting construction of a two-family dwelling in the district in question, and cannot assert a lien for materials furnished to convert a one-family into a two-family dwelling there. Nor are such companies entitled to such lien on the ground that the property was benefited by the changes, since it was damaged to the extent of the cost of restoring the building to a single-family dwelling in order to relieve its owner from prosecutions under the zoning law.

"Spot" Zoning

MARYLAND.—*Chayt* v. *Maryland Jockey Club of Baltimore City*, Court of Appeals, March 5, 1941, reported in 18 A. 856.

The defendant Jockey Club is the owner of a racetrack, and of several vacant lots adjoining it, which are not within the racetrack enclosure. The property was in a residential zoning district, and the racetrack was a non-conforming use.

Chayt is the owner of residential property in the same district. The club sought to erect a stable on its vacant land, to be employed in connection with its racetrack, claiming that this vacant land, as well as the racetrack, was a non-conforming commercial use, but was enjoined from so doing; and the city amended the zoning ordinance by making all the Jockey Club property commercial.

The amendment was attacked by Chayt as "spot" zoning; but the court held that the amendment was not open to this objection because the racetrack was a commercial use, although non-conforming, and the amendment making the vacant lots adjoining it also commercial, was an extension of a commercial use.

The amendment, opposed as an unreasonable exercise of the police power and therefore a taking of property contrary to the constitution of the state and the United States, was upheld on the following reasoning:

In order to impose restrictions under the police power, a valid exercise of that power is necessary. But this power is exercised for the protection of the property restricted, and not for that of surrounding property; therefore the owners of such property obtain no vested right under the police power ordinance.

It follows that the amending ordinance, placing nearby property in a lower classification, and to that extent freeing it from restriction, deprives the nearby owner of no legal rights.

EDITOR'S NOTE: This decision is another phase of this case summarized in our Notes for May, 1941.

In his report of the present decision, Alfred Bettman, in his Planning Notes, written for the American Society of Planning Officials, points out "the dangers to zoning which lurk in treating zoning regulations as creating property rights, and that the best conception of a zoning ordinance is that of being a community plan for the benefit of the whole community and not a mere collection of single property or small neighborhood adjustments."

This is indeed true. It should also be observed that while the state cannot bargain away its sovereign police power, and no one can obtain vested rights under it, a police power regulation may have injurious effects tending to show that it is unreasonable and therefore invalid.

Thus, in this case, neighboring property owners were given the right by the zoning enactments to appear and offer evidence to show that their property interests were injuriously affected by the lightening of the zoning regulations, resulting from the passage of the amendment involved in this case, to an extent that would make this amendment unjust and therefore void. Whether this evidence was of sufficient weight for this purpose is another matter.

In connection with this case it may be noted that the objection to what is called "spot" zoning is that it is unreasonable, because it is not in consonance with a plan of general benefit or not properly related to neighboring land and of benefit to it. Often this is due to the fact that the lot in question is small and in itself not a proper district, and not related to other land of similar use.

Total Exclusion of Use

NEW JERSEY.—*First Church of Christ Scientist* v. *Board of Adjustment of City of Newark*, Supreme Court, reported 22 Atl. (2d) 569.

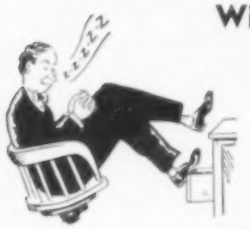
The Newark Zoning Ordinance excludes gasoline stations from the city throughout its entire extent; although, as the Court notes in its opinion, they have not in fact been so excluded. It is not the function of a zoning ordinance to exclude any legitimate use from all property in the city.

The New Jersey constitutional amendment authorizing zoning limited the ordinances to those "limiting and restricting to specified districts, and regulating therein buildings and structures, according to their construction, and the nature and extent of their use." The enabling act of the legislature follows the constitution. The ordinance prohibiting gasoline stations throughout the city was without any reference to districts and was unlawful.

Central Planning Authority for England and Wales

IN its Spring 1942 issue, our English contemporary *Town and Country Planning* reports the action of the British Government in setting up an agency which the Town and Country Planning Association had long advocated—a Central Planning Authority. The functions of the new agency, to be known as the Ministry of Works and Planning, will be to lay down the general principles to which town and country planning will conform, and to guide the formulation by local authorities in England and Wales of plans which will adequately reflect the national policy for urban and rural development.

In the official statement of government policy announcing this decision, the necessity of planning for post-war reconstruction is emphasized, including the speedy provision of houses for those who need them, the redevelopment of devastated areas, the clearance of slums, the relief of overcrowding, the provision of all necessary public services, and the general promotion of rural development in the light of a positive policy for the maintenance of a healthy and well-balanced agriculture



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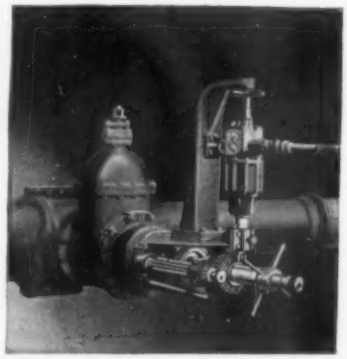
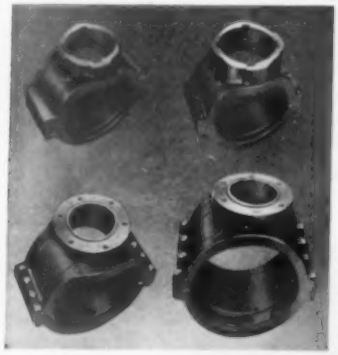


SMITH Tapping Sleeves for making pressure connections to AWWA standard mains, classes A, B and C, and for pressures up to 150 lbs. per square inch, are made in four types, here illustrated. At top: 1. Clamped Sleeve Joint; 2. Bolted Sleeve Joint. Bottom row: 3. Bolted Sleeve Joint with flanged end joint valve connection; 4. Hackensack Sleeve Joint with flanged end joint valve connection.



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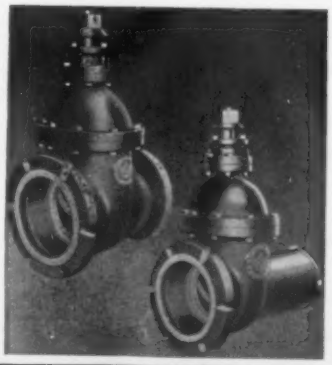

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It's an easy, quick job to lay permanent 2" mains with McWane oversize THREADED joint pipe. All you do is screw 'em together. Immediate shipments!

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Municipal Law Notes and Decisions

Prepared by National Institute of Municipal Law Officers, Washington, D. C.
Charles S. Rhyne, Executive Director

United States Supreme Court Upholds Commercial Handbill Prohibition

On April 13, 1942, the Supreme Court of the United States, in a unanimous opinion, upheld New York City's police regulation prohibiting distribution of commercial handbills in the case of *Valentine, Police Commissioner of New York City* v. *Chrestensen*. The Court found no merit in the contention that such a prohibition interferes with the freedom of speech and press guaranteed by the Federal Constitution. The Court ends the many conflicting opinions and questions arising as a result of its decisions invalidating handbill ordinances in *Lovell* v. *Griffin*, 303 U. S. 444 (1938); *Hague* v. *C.I.O.*, 307 U. S. 496 (1939); and *Schneider* v. *State*, 308 U. S. 147 (1939).

In the *Chrestensen* case, *supra*, the owner of a former U. S. Navy submarine, which he now exhibits for profit, sought to distribute a handbill soliciting customers for a stated admission fee. When advised by New York City police that he could not distribute such a commercial handbill, but that he could distribute "protest" or "opinion" handbills, he merely added to the reverse side of the handbill a protest against certain action of the New York City Dock Commissioner in denying him the use of a city wharf and then sought to distribute this hybrid handbill. When stopped by the police, he brought suit to enjoin the police from interfering with his distribution of the handbill on the ground that the regulation prohibiting commercial handbill distribution is an invalid interference with the freedom of speech and press guaranteed by the Fourteenth Amendment of the Federal Constitution. The regulation in question provided as follows:

1. "Handbills, cards and circulars.—No person shall throw, cast or distribute or cause or permit to be thrown, cast or distributed, any handbill, circular, card, booklet, placard or other advertising matter whatsoever, in or upon any street or public place, or in a front yard or court yard, or on any stoop, or in the vestibule or any hall of any building, or in a letterbox therein; provided that nothing herein contained shall be deemed to prohibit or otherwise regulate the delivery of any such matter by the United States postal service, or prohibit the distribution of sample copies of newspapers regularly sold by the copy or by annual subscription. This section is not intended to prevent the lawful distribution of anything other than commercial and business advertising matter."

The Federal District Court and the Second Circuit Court of Appeals agreed with *Chrestensen* and held the regulation invalid. Mr. Justice *Roberts*, in the opinion which he handed down for the Supreme Court, disposed of the case in the following three brief paragraphs:

"The question is whether the application of the ordinance to the respondent's activity was, in the circumstances, an unconstitutional abridgment of the freedom of the press and of speech.

"This court has unequivocally held that the streets are proper places for the exercise of the freedom of communicating information and disseminating opinion and that, though the states and municipalities may appropriately regulate the privilege in the public interest, they may not unduly burden or proscribe its employment in these public thoroughfares. We are equally clear that the Constitution imposes no such restraint on government as respects purely commercial advertising. Whether, and to what extent, one may promote or pursue a gainful occupation in the streets; to what extent such activity shall be adjudged a derogation of the public right of user, are matters for legislative judgment. The question is not whether the legislative body may interfere with the harmless pursuit of a lawful business, but whether it must permit such pursuit by what it deems an undesirable invasion of, or interference with, the full and free use of the highways by the people in fulfillment of the public use to which the streets are dedicated. If the respondent was attempting to use the streets of New York by distributing commercial advertising, the prohibition of the code provision was lawfully invoked against his conduct.

"The respondent contends that, in truth, he was engaged in the dissemination of matter proper for public information, none the less so because there was inextricably attached to the medium of such dissemination commercial advertising matter. The court below appears to have taken this view since it adverts to the difficulty of apportioning, in a given case, the contents of the communication as between what is of public interest and what is for private profit. We need not indulge nice appraisal based upon subtle distinctions in the present instance nor assume possible cases not now presented. It is enough for the present purpose that the stipulated facts justify the conclusion that the affixing of the protest against official conduct to the advertising circular was with the intent, and for the purpose, of evading the prohibition of the ordinance. If that evasion were successful, every merchant who desires to broadcast advertising leaflets in the streets need only append a civic appeal, or a moral platitude, to achieve immunity from the law's command."

It is to be noted that the Court did not deign to even notice the claims that the *Lovell*, *Hague*, and *Schneider* cases, *supra*, allowed or contemplated any argument whatever as to the opinion of the Court on the commercial handbill distribution. On the contrary, the Court reaffirmed the interpretation of some city attorneys that even under these three decisions the Court allows municipalities to regulate the privilege of distributing opinion and protest literature so long as they do "not unduly burden or proscribe" such distribution on public thoroughfares. See "Municipalities and the Law in Action" for 1940, pp. 187-205, Report of the Model Handbill Ordinance Committee of the National Institute of Municipal Law Officers.

The question in future cases will be whether or not the particular ordinance before the Court, under the particular facts of the case, unreasonably interferes with the freedom of speech and press guaranteed by the Federal Constitution. The Court will in future cases have to draw the line here just as it is beginning to in the picketing cases. See the decisions of the Court handed down March 30, 1942, entitled *Bakery and Pastry Drivers and Helpers Local 802 of the International Brotherhood of Teamsters* v. *Wohl; Carpenters and Joiners' Union of America Local No. 218* v. *Ritters' Cafe; Allen-Bradley Local No. 1111, United Electrical, Radio and Machine Workers of America* v. *Wisconsin Employment Relations Board*. The question of commercial handbill distribution is settled by the *Chrestensen* case, so the only questions must come from ordinances which attempt to "appropriately regulate the privilege in the public interest" of communicating information and disseminating opinion.

Previous Decisions of State Courts

The State Courts have in general sustained municipal ordinances prohibiting the distributing of commercial advertising: *People* v. *Horowitz*, 27 N. Y. Cr. R. 237, 140 N. Y. Supp. 487 (1912); *Allen* v. *McGovern*, 12 N. J. Misc. 12, 169 Atl. 345 (1933); *People* v. *St. John*, 108 Cal. App. 779, 288 Pac. 53 (1930); *Philadelphia* v. *Brabender*, 201 Pa. 574, 51 Atl. 374 (1902); *In re Anderson*, 69 Neb. 686, 96 N. W. 149 (1903); *Wettengel* v. *City of Denver*, 20 Colo. 552, 39 Pac. 343 (1895); *City of Milwaukee* v. *Kassen*, 203 Wisc. 383, 234 N. W. 354 (1931); *Sieroty* v. *City of Huntington Park*, 111 Cal. App. 377, 395 Pac. 564 (1931); *Goldblatt Bros. Corporation* v. *City of East Chicago*, 211 Ind. 621, 627, 6 N. E. (2d) 331 (1937); *Chicago* v. *Rhine*, 363 Ill. 619, 2 N. E. (2d) 905 (1936); *San Francisco Shopping News Co.* v. *City of So. San Francisco*, 69 F. (2d) 879 (C. C. A. 9th, 1934), cert. den. 293 U. S. 606 (1934); *Fifth Avenue Coach Company* v. *City of New York*, 221 U. S. 467 (1911).

There have been instances in which inferior State Courts have reached a contrary decision to that of the Supreme Court. See *Loyear* v. *City of Portland, Oregon*, 5 Municipal Law Journal 120 (Cir. Ct. Multnomah Co. Ore. Sept. 23, 1940). Another case cited as in accord with the *Loyear* decision is *People* v. *Taylor*, 33 Cal. App. (2d) 760, 85 Pac. (2d) 978 (1938). There the handbill was a four-page mimeographed release of the San Diego Communist Party, almost wholly devoted to political discussion, but containing an advertisement of a book store, so that case should be cited as involving "opinion" or "political" literature. In a more recent case, *Pittsford* v. *City of Los Angeles*, 7 Municipal Law Journal 48, 122 P. (2d) 535 (Feb. 18, 1942), the California District Court of Appeals upheld a City of Los Angeles ordinance which prohibits commercial handbill distribution as construed to prohibit street photographers from handing order cards or envelopes to person just photographed.

Cities may, therefore, either prohibit or regulate and license commercial handbill distribution in the public interest. The case of *Reuben H. Donnelly Corporation* v. *City of Bellevue*, 5 Municipal Law Journal 130 (Ky. 1940) upholds an ordinance imposing a license fee of $25.00 per year or $1.00 per day upon commercial handbill distributors.

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This message appeared in every daily newspaper, both English and foreign language, in the United States and Canada, on March 30, 1942

Conventions—When and Where

*May 11-12.—St. Louis, Mo.
Missouri Association of Municipal Utilities. (De Soto Hotel.) Sec.-Treas., W. J. Carroll, Fulton, Mo.

May 11-13.—Baltimore, Md.
National Association of Housing Officials. (Lord Baltimore Hotel.) Dir., Coleman Woodbury, 1313 E. 60th St., Chicago, Ill.

May 11-13.—Atlantic City, N. J.
National Fire Prevention Association. (Chalfonte-Haddon Hall.) Dir., Percy Bugbee, 60 Batterymarch St., Boston, Mass.

*May 13.—Kennett Square, Pa.
Pennsylvania Water Works Operators' Association. Eastern Sectional meeting. (Kennett Square Country Club.) Sec.-Treas., I. M. Glace, 22 S. 22nd St., Harrisburg, Pa.

May 14-15.—Toledo, Ohio
American Water Works Association—Ohio Section. (Commodore Perry Hotel.) Sec., T. R. Lathrop, State Dept. of Health, Columbus, Ohio.

May 18-21.—Pittsburgh, Pa.
Building Officials' Conference of America. (Hotel Schenley.) Sec.-Treas., Arthur N. Rutherford, Building Inspector, West Hartford, Conn.

May 20-25.—Hollywood, Calif.
National Association of County Officials. Sec.-Treas., George F. Breitbach, Court-House, Milwaukee, Wisc.

May 21-25.—Grants Pass, Ore.
League of Oregon Cities. (Redwoods Hotel.) Sec., Herman Kehrli, University of Oregon, Eugene, Ore.

May 24-27.—Philadelphia, Pa.
Pennsylvania State Association of Township Commissioners. (Benjamin Franklin Hotel.) Sec.-Treas., H. A. Fritschman, Upper Darby, Pa.

*May 24-27.—Ocala, Fla.
Florida Commercial Secretaries' Abridged School. (Hotel Marion.) Pres., Russel S. Dymond, Florida Commercial Secretaries Association, Daytona Beach, Fla.

May 25-27.—Indianapolis, Ind.
National Conference on Planning. (Claypool Hotel.) Joint annual conference of American Society of Planners, American Planning and Civic Association, American Institute of Planners, and National Planning Association. Conference Dir., Walter H. Blucher, 1313 E. 60th St., Chicago, Ill.

May 27-28.—Boston, Mass.
New England Sewage Works Association. Spring meeting. (Hotel Bradford.) Sec.-Treas., LeRoy W. Van Kleeck, State Dept. of Health, Hartford, Conn.

May 28-29.—Prescott, Ariz.
Arizona Municipal League.—Sec., James Girand, Phoenix, Ariz.

May 28-29.—Biloxi, Miss.
Mississippi Municipal League. (Buena Vista Hotel.) State Mgr., C. D. Ross, Old Merchants Bank Building, Jackson, Miss.

June 2-5.—Cleveland, Ohio
Smoke Prevention Association. (Hotel Statler.) Sec., Frank A. Chambers, 139 North Clark St., Chicago, Ill.

*June 4.—New Castle, Pa.
Pennsylvania Water Works Operators' Association. Western Sectional meeting. (Hotel Castleton.) Sec.-Treas., I. M. Glace, 22 S. 22nd St., Harrisburg, Pa.

*June 5-6.—Cincinnati, Ohio
Community Chests and Councils, Inc. (Netherlands Plaza Hotel.) Exec. Vice-Pres., Allen T. Burns, 155 E. 44th St., New York City.

*June 5-6.—Albany, N. Y.
New York State Sewage Works Association. Spring meeting. (Hotel Ten Eyck.) Sec.-Treas., A. S. Bedell, State Dept. of Health, Albany, N. Y.

*June 7-10.—Des Moines, Ia.
National Association of Tax Administrators. (Hotel Fort Des Moines.) Exec. Sec., Charles Conlon, 1313 E. 60th St., Chicago, Ill.

June 8-10.—Syracuse, N. Y.
Conference of Mayors and Other Municipal Officials of the State of New York. (Hotel Syracuse.) Exec. Sec., William P. Capes, City Hall, Albany, N. Y.

June 8-11.—Cleveland, Ohio
American Society of Mechanical Engineers. (Hotel Statler.) Semi-annual meeting. Sec., C. E. Davies, 29 W. 39th St., New York City.

*June 12-13.—Fort Collins, Colo.
Colorado Municipal League. Annual meeting. (Northern and Armstrong Hotels.) Sec.-Treas., Don C. Sowers, University of Colorado, Boulder, Colo.

June 13-17.—Ely, Minn.
League of Minnesota Municipalities. Exec. Sec., C. C. Ludwig, University of Minnesota, Minneapolis, Minn.

June 18-19.—Minneapolis, Minn.
Central States Sewage Works Association. Fifteenth annual convention. (Nicollet Hotel.) Sec., E. J. Beatty, Sewage Treatment Plant, Menasha, Wisc.

June 21-25.—Chicago, Ill.
American Water Works Association. (Stevens Hotel.) Sec., Harry E. Jordan, 22 E. 40th St., New York City.

June 22-25.—Buffalo, N. Y.
Municipal Finance Officers' Association of the United States and Canada. Exec. Sec., Carl H. Chatters, 1313 E. 60th St., Chicago, Ill.

June 22-26.—Erie, Pa.
Pennsylvania State Association of Boroughs. Pres., Thomas F. Chrostwaite, Hanover, Pa.

*June 25-26.—Detroit, Mich.
American Institute of Architects. (Hotel Statler.) Exec. Sec., E. C. Kemper, 1741 New York Ave., Washington, D. C.

June 25-27.—Reading, Pa.
Eastern Association of Fire Chiefs. (Berkshire Hotel.) Sec., Charles S. Clark, Box 217, Wayne, Pa.

June 28-30.—Sun Valley, Idaho
Idaho Municipal Officers' Association. Sec., George C. Huebner, Emmett, Idaho.

June 28-July 2.—Denver, Colo.
National Education Association of the United States. Exec. Sec., Willard E. Givens, 1201 16th St., N. W., Washington, D. C.

*July 19-23.—Dallas, Texas
Southwestern Chamber of Commerce Institute. (Adolphus Hotel.) Mgr., Roger Miller, Chamber of Commerce Building, Dallas, Texas.

*July 21-23.—Wilkes-Barre, Pa.
Pennsylvania Chiefs of Police Association. (Hotel Stearling.) Sec., F. B. Titus, Lansdowne, Pa.

*July 26-August 1.—Missoula, Mont.
Rocky Mountain Institute for Commercial Organization Executives. (Montana State University.) Dean, Robert C. Line, School of Business Administration, Montana State University, Missoula, Mont.

*July 29-31.—Poughkeepsie, N. Y.
New York State Association of Chiefs of Police. (Nelson House.) Sec.-Treas., R. W. Morris, P. O. Box 346, Geneva, N. Y.

*August 2-7.—San Bernardino, Calif.
Western Institute of Commercial and Trade Executives. (Arrowhead Springs Hotel.) William E. Hammond, Mgr., 333 Pine St., San Francisco, Calif.

August 16-22.—Evanston, Ill.
National Institute for Commercial and Trade Organization Executives. (Northwestern University.) Sec.-Treas., Clarence R. Miles, 832 First National Bank Bldg., Chicago, Ill.

August 17-19.—Des Moines, Ia.
League of Iowa Municipalities. (Savery Hotel.) Sec.-Treas., Frank G. Pierce, Marshalltown, Iowa.

August 25-26.—Harrisburg, Pa.
Pennsylvania Water Works Operators' Association. (Hotel Penn-Harris.) Sec.-Treas., I. M. Glace, 22 S. 22nd St., Harrisburg, Pa.

*September 7-9.—Princeton, N. J.
Governmental Research Association. Sec.-Treas., Lent D. Upson, 5135 Cass Ave., Detroit, Mich.

September 9-11.—Traverse City, Mich.
American Water Works Association—Michigan Section. (Park Place Hotel.) Sec., M. N. Gerardy, Water Board Bldg., Detroit, Mich.

September 9-12.—Denver, Colo.
National Association of Assessing Officers. Exec. Dir., Albert W. Noonan, 1313 E. 60th St., Chicago, Ill.

September 15-18.—Poland Spring, Maine
New England Water Works Association. (Poland Spring House.) Sec., Frank J. Gifford., 613 Statler Bldg., Boston, Mass.

September 18.—Pittsburgh, Pa.
American Water Works Association—Western Pennsylvania Section. (Roosevelt House.) Sec., E. P. Johnson, 418 Flannery Bldg., Pittsburgh, Pa.

September 21-24.—Los Angeles, Calif.
League of California Cities. (Biltmore Hotel.) Sec., Richard Graves, 2121 Allston Way, Berkeley, Calif.

September 25.—New London, Conn.
New England Sewage Works Association. Fall meeting. (Ocean Beach Pavillion.) Sec.-Treas., LeRoy W. Van Kleeck, State Dept. of Health, Hartford, Conn.

September 24-26.—St. Paul, Minn.
American Water Works Association—Minnesota Section. (Lowry Hotel.) Sec.-Treas., Ronald M. Finch, Wallace & Tiernan Co., Inc., 414 Flour Exchange, Minneapolis, Minn.

October 2-4.—Chicago, Ill.
Institute of Traffic Engineers. (Hotel Stevens.) Sec.-Treas., W. Graham Cole, 60 John St., New York City.

*October 7-9.—Springfield, Ill.
Illinois Municipal League. (Leland Hotel.) Exec. Dir., A. D. McLarty, 537 So. 4th St., Springfield, Ill.

*October 7-9.—Philadelphia, Pa.
American Water Works Association—Four States Section. (Benjamin Franklin Hotel.) Sec., Lloyd Nelson, U. S. Pipe & Foundry Co., Broad and Chestnut Streets, Philadelphia, Pa.

October 11-15.—Richmond, Va.
League of Virginia Municipalities. (John Marshall Hotel.) Exec. Sec., Harold I. Baumes, 902 Travelers Bldg., Richmond, Va.

October 11-15.—French Lick, Ind.
International City Managers' Association. (French Lick Hotel.) Exec. Dir., Clarence E. Ridley, 1313 E. 60th St., Chicago, Ill.

*October 12.—Clarksburg, W. Va.
League of West Virginia Municipalities. Exec. Sec., Hume K. Nowlan, Hinton, W. Va.

October 12-15.—Little Rock, Ark.
American Water Works Association—Southwest Section. Sec., Lewis A. Quigley, 3320 W. Berry St., Fort Worth, Texas.

October 15-17.—Cleveland, Ohio
Federation of Sewage Works Associations. (Hotel Statler.) Exec. Sec., W. H. Wisely, Box 18, Urbana, Ill.

October 18-21.—Cleveland, Ohio
American Public Works Association. (Hotel Statler.) Exec. Dir., Norman Hebden, 1313 E. 60th St., Chicago, Ill.

*October 21-25.—Chicago, Ill.
The American Municipal Association. Exec. Dir., Earl D. Mallery, 1313 E. 60th St., Chicago, Ill.

Municipal and Civic Publications

Please mention THE AMERICAN CITY when ordering

Public Works Conference

Public Works Engineers' Yearbook.—American Public Works Association, 1313 E. 60th St., Chicago, Ill. 1942. 387 pp. $3.50.

Papers presented at the Association's congress in New Orleans in October of last year, grouped under broad functional heads for the purpose of reference; plus other timely and important material in the field especially prepared by authorities.

Waste Treatment

Industrial Waste Treatment Practice.—By E. F. Eldridge, Research Associate, Engineering Experiment Station, Michigan State College. McGraw-Hill Book Co., Inc., New York. 1942. 401 pp. $5.00 from THE AMERICAN CITY.

A text discussing solely the various phases of industrial-waste treatment that the engineer must face. Structural capacities, unit loadings, and other pertinent data are included to aid in construction of suitable plants.

Natural Water Purification

The Natural Purification of River Muds and Pollutional Sediments.—By Gordon M. Fair, Edward W. Moore, and Harold A. Thomas, Jr. Reprinted from Sewage Works Journal, March, July, and November, 1941, by the Graduate School of Engineering, Harvard University, Cambridge, Mass. 84 pp.

A discussion of the processes of natural purification by which river muds and pollutional sediments are stabilized, and of the effects of this natural purification upon the supernatant waters.

Local Transportation in Wartime

Local Passenger Transport.—Transportation and Communication Department, Chamber of Commerce of the United States, Washington, D. C. 1942. 13 pp.

Suggestions for reducing demands upon overburdened local transportation systems and making the best possible use of all facilities available.

Report on Bridgeport Transportation Survey, March 30, 1942.—Prepared by Hawley S. Simpson, American Transit Association, 292 Madison Ave., New York, for the Bridgeport Chamber of Commerce, Bridgeport, Conn. 31 pp., mimeo.

An extensive investigation of passenger transportation facilities in the defense center of Bridgeport—the causes of the critical situation and its outlook—and a plan for relief, involving staggered hours for transportation, which will permit more intensive and efficient use of existing vehicles.

Fire Prevention Conference

Proceedings of the Sixty-Ninth Annual Conference of the International Association of Fire Chiefs.—Published by Daniel B. Tierney, Secretary, Arlington, Mass. 231 pp.

Talks and discussions on topics of current interest in the field of fire prevention and control, from the conference of the International Association of Fire Chiefs held in Boston in August.

Smoke Abatement

Smoke Abatement.—By L. Vernon Briggs, The Old Corner Book Store, Inc., Boston, Mass. 1941. 175 pp. $3.50 from THE AMERICAN CITY.

A general discussion of progress in smoke abatement in various cities of the United States and abroad, covering its effect on health and on municipal economy.

Electrical Engineering Data

Standard Handbook for Electrical Engineers.—By A. E. Knowlton. McGraw-Hill Book Co., New York. Seventh Edition, 1941. 2303 pp. $8.00 from THE AMERICAN CITY.

A comprehensive, orderly compilation of data valuable in all phases of electrical work—a veritable encyclopedia of authoritative information on generating plants, power-system electrical equipment, power transmission, and many other related subjects.

Engineering Standards

List of American Standards.—American Standards Association, 29 W. 39th St., New York. 1942. 16 pp. Free.

A new list of standards published by the American Standards Association, covering engineering subjects, definitions of technical terms and symbols, and specifications for metals and materials, etc. The list is indexed by subject and alphabetically, with separate headings for defense emergency standards developed specifically for war-production needs.

Surveying Instruments

Gurley Manual of Surveying Instruments.—By the W. & L. E. Gurley Co., Troy, N. Y. 1941. 208 pp. 50c.

A booklet of complete instructions covering the care, operation, and adjustment of all surveying instruments manufactured by this company, with tables relating to solar observations and observations on polaris.

Lighting for Airports

Airport Lighting.—Civil Aeronautics Administration, U. S. Department of Commerce. Bulletin No. 10. Apply to Supt. of Documents, Washington, D. C. 1941. 39 pp. 15c.

A comprehensive picture of the lighting systems of airports, with an explanation of the importance and function of each unit which goes to make up the complete lighting system. Explanatory diagrams included.

Lighting Standards

Illuminating Engineering Nomenclature and Photometric Standards.—Illuminating Engineering Society, 51 Madison Ave., New York. 1942. 42 pp. 25c.

Approved on February 27, 1942, as American Standard Z7.1-1942, by the American Standards Association, superceding American Standard Z7 published in 1932.

Financing Sewage Disposal

Financing Sewage Disposal Plants, with Special Reference to Sewer Service Charges.—Compiled by Bureau of Municipal Research and Service, University of Oregon, cooperating with The League of Oregon Cities, Eugene, Ore. 1942. 14 pp., mimeo.

A discussion of four methods of financing sewage-disposal plants: bonds without special assessments; special assessments, with or without bonds; taxes for sinking funds; and sewer service charges; with most extended consideration of the last type.

Safety Promotion

The Organization and Operation of Safety Conferences.—National Safety Council, Inc., 20 N. Wacker Drive, Chicago, Ill. 1942. 26 pp., mimeo.

Suggestions for holding regional, state, and local safety conferences, covering length and type of conference, sponsorship, committees, etc. Sample materials are included.

Civilian Defense

Civilian Defense of the United States.—By Colonel R. Ernest Dupuy, G.S.C., and Lieutenant Hodding Carter, F.A. Farrar & Rinehart, Inc., New York. 1942. xii + 296 pp. $2.50 from THE AMERICAN CITY.

"A new battle force, the civilian population, is directly and immediately involved in totalitarian warfare." What can the individual civilian do as a member of this new force? This is the question which is answered in this practical, non-technical book, which, unlike the several other books that have come out under similar titles, deals not only with air raid protection, but with all the other ways in which the individual citizen can aid in speeding production, building morale, making strong the future peace, and in general being a good citizen in the broad social sense.

Civil Defense.—By C. W. Glover, Capt. Late R.A., M.Inst.C.E., M.I.Struct.E., M.Inst.R.A., F.P.W.I., Fellow and Member of Council of the A.R.P. Institute. Chemical Publishing Co., Inc., Brooklyn, N. Y. Third Edition, 1941. xviii + 794 pp. $16.50 from THE AMERICAN CITY.

The third edition of an exhaustive treatment of the science and art of protection against air raids, originally published in England, and tested in its soundness by actual bombing. Seventeen chapters take up Probable Forms of Aerial Attack, Bombs; Gas Bombs and Their Effects; Gas-Proof Rooms; Individual Protection; Buildings Generally; The Strengthening of Existing Buildings; Individual Shelters; Trenches; Communal Shelters; Bomb-Proof Shelters; Statutory Basis of A.R.P.; The Responsibilities of the Layman; Camouflage; Air-Raid Precautions in Factories; Costs of Protection; and Organization of A.R.P. A final chapter, added to this edition, discusses additional techniques of air raid protection learned in actual warfare.

Planned A.R.P.—By Tecton, Architects. Chemical Publishing Co., Inc., Brooklyn, N. Y. First American Edition, 1941. ix + 138 pp. $2.50 from THE AMERICAN CITY.

Also originally published in England, this book, based on the investigation of structural protection against air attack in the metropolitan Borough of Finsbury, describes a plan for the complete protection of the whole population of a city against air raids, by means of large shelters equipped with air-conditioning plants, electric lighting, warden posts, decontamination chambers, etc.

Civilian Defense.—The University of Chicago Round Table, University of Chicago, Chicago, Ill. 1942. 29 pp. 10c.

Radio discussion of civilian defense—possibilities of air attack on this country, responsibilities of the Office of Civilian Defense and size and operation of the civilian-defense job, number of persons needed to protect American cities, what the individual citizen can do, etc. Participants in the discussion are officials in the office of Civilian Defense and a commissioner of Home Security in England. (See p. 51 of this issue.)

War Publications Bibliographies

Published by the U. S. Office of Education, Washington:

Reference List of National Defense Publications. 1942. 36 pp.

A selection of bulletins and articles on national defense, prepared by federal agencies engaged in the national defense program.

Government Sources of Information on National Defense. 1942. 50 pp., photo offset.

Brief explanations of defense functions of federal government departments and agencies, and of their publications in this field.

Highway Policy

American Highway Policy.—By Charles L. Dearing. The Brookings Institution, Washington, D. C. 1941. 286 pp. $3.00.

A comprehensive study of highway policies discussing history, evolution, administrative, and financial organization of road management, and also general principles and recommendations for proper distribution of authority over highway administration.

Implementing Planning

Urban Planning and Public Opinion—A Pilot Study.—The Bureau of Urban Research, Princeton University, Princeton, N. J. 1942. 36pp. 50c.

Methods and results of a survey of public opinion in a small city, and the possible uses of such surveys by planning organizations. (See p. 43 of this issue.)

City Rehabilitation

Building a Better Boston.—The City Planning Board, 43 City Hall, Boston, Mass. 1941. 65 pp., photo offset.

A progress report of the Advisory Committee on Community Rehabilitation of the City Planning Board of Boston, presenting a general statement of the problems of blight, decentralization, and rehabilitation; and an analysis of existing conditions—physical, social and economic—in the South End district of the city. (See also p. 65 of this issue.)

Regional Survey

The Elma Survey.—Conducted and Prepared by the Washington State Planning Council, in Cooperation with the People of the Elma Region, and Assisted by Private, County, State, and Federal Agencies. Apply to Washington State Planning Council, Olympia, Wash. 1941. 166 pp., mimeo.

Illustrated survey of a timber-depleted region, unusual in the comprehensive and detailed coverage of all factors, good and bad, having to do with the region's welfare—economic organization, natural resources, social facilties, and people; and unusual in the extent to which the whole community—agencies and individuals—participated in the cooperative effort of making the survey. Recommendations are incorporated. (See p. 48 of this issue.)

New York Housing

Report of the State Commissioner of Housing to the Governor and the Legislature of the State of New York.—By Edward Weinfeld, State Commissioner of Housing, Albany, N. Y. 1942. 64 pp.

A readable account of how war-housing problems have been handled in New York in 1941—covering vacancy listings, new housing, rent control, and evacuation in case of war; recent legislation and court decisions in the state relating to housing; and summary data on all public, defense, and limited-dividend housing projects.

Directions in City Government

Recent Trends in Municipal Government in the United States.—By A. D. H. Kaplan. Dalhousie University Bulletins on Public Affairs, Toronto, Canada. 1941. 19 pp.

Analysis of current trends in American city government, in the realms of organization, finance, and relations between the municipalities and the senior governments.

Municipal Voting

City Proposals Voted Upon: 1941.—Bureau of the Census, Department of Commerce, Washington, D. C. 1942. 44 pp., photo offset.

Summary data and analysis of proposals voted on by American cities in 1941—types of proposals, number of adoptions, frequency of elections, and geographic distribution of cities voting on proposals.

Metropolitan Government

The Government and Misgovernment of London.—By William A. Robson, Ph.D., LL.M., B.SC. (Econ.), Reader in Administrative Law in the University of London. W. W. Norton & Co., Inc., 70 Fifth Ave., New York. 1942. 484 pp. $4.50 from THE AMERICAN CITY.

The author of this book believes the metropolis to be a distinct problem in government which cannot be treated as part of the field of local government. From this point of view he presents a critical analysis of London's government past and present, with constructive suggestions for its improvement in the future. This is the American publication of the book, which first appeared in England in 1939 (see review in the December, 1939, issue of THE AMERICAN CITY).

Georgia City Government

Municipal Government and Administration in Georgia.—By Lloyd B. Raisty, Professor of Public Administration, University of Georgia. Monograph No. 3, published by the Institute for the Study of Georgia Problems through the University of Georgia Press, Athens, Ga. 1941. xvi+316 pp.

A joint study by the Tennessee Valley Authority and the University of Georgia, the material for which is based on data gathered from personal field visits to municipalities, and study of municipal charters and reports of various kinds. Ten aspects of municipal government are taken up.

Defense-News Publication

Civilian Defense News—Official Publication of the Milwaukee County Council of Defense, Milwaukee, Wis. Vol. I, No. 1, April 10, 1942. 4 pp.

The first issue of a new defense-news bulletin, to serve as a clearing house of information on defense activities and developments in the city. Besides items of current interest, it has several special departments—Who's Who, Sectional and Committee Reports, and The Clearing House.

City Employee Salaries

Cost-of-Living Salary Plans for Municipal Employees.—By J. M. Leonard and Rosina Mohaupt, Detroit Bureau of Governmental Research, 5135 Cass Ave., Detroit, Mich. School of Public Affairs and Social Work of Wayne University, Detroit. Apply to the former. 1942. 51 pp., mimeo.

A presentation and critical analysis of various cost-of-living salary plans for municipal employees, with specific consideration of the plans of Dearborn and Detroit, Michigan, and St. Paul, Minnesota.

War Employment Shifts

Impact of the War Production Program on the Labor Force—Based on Testimony Presented to the House Committee Investigating National Defense Migration.—By Donald H. Davenport, Bureau of Labor Statistics, U. S. Department of Labor. Washington, D. C. 1942. 23 pp., mimeo.

An over-all picture—by analysis, tables, and graphs—of changes in the amount, type, and geographic distribution of employment in the country, due to the war-production program, including data on individual cities.

Food Preservation in Wartime

Community Food Preservation Centers.—Prepared by Bureau of Home Economics, U. S. Department of Agriculture. Miscellaneous Publication No. 472. Apply to Supt. of Documents, Washington, D. C. 1941. iii + 64 pp. 10c.

A handbook on community food preservation, with practical detailed suggestions on the physical set-up, financing, organization, and operation of a community food-preservation center—including descriptions of food-preservation processes.

War Objectives

National Resources Development—Report for 1942.—National Resources Planning Board. Apply to Supt. of Documents, Washington, D. C. v + 227 pp.

In this report are presented the major objectives for which this country is fighting. Part I reviews general problems and objectives in the post-war planning field, and outlines the Board's activities in the war program; Part II gives a record of progress in public works planning at all levels; and Part III sets forth statements of policy on post-war planning in specific fields of national resources. (See p. 5 of this issue.)

Post-War Planning

Published by The Twentieth Century Fund, 330 W. 42d St., New York:

The Road We Are Traveling, 1914-1942—Guide Lines to America's Future as Reported to The Twentieth Century Fund.—By Stuart Chase. 1942. 106 pp. $1.00.

Post-War Planning in the United States.—By George B. Galloway. 1942. xi + 158 pp. 60c.

These two publications deal with post-war problems, particularly in the United States. "The Road We Are Traveling" is the first of a projected series of popular "exploratory reports" on the subject, to appear this year and next, which are being published under the general title "When the War Ends." Later books will examine particular phases of post-war planning. This one gives a rapid, dramatic, telescopic picture of this country's economic history from 1914 to 1942 and of present economic and governmental trends; outlines broad purposes and goals for the post-war period, and points out the principal problems which will have to be faced.

The second publication is a revised enlarged edition of "A Survey of Institutional Research on American Post-War Problems," listed in the February issue of THE AMERICAN CITY (p. 111). It describes briefly the activities, personnel and publications, in the post-war field, of over one hundred private and public organizations and agencies in the country. Agencies are classified according to the fields of planning they are covering; and a bibliography on the subject is listed.

War Housing

April, 1942, issue of the ARCHITECTURAL RECORD, *119 W. 40th St., New York. pp. 42-84. $1.00.*

This issue of the *Architectural Record* is devoted to public housing. Of interest to readers of THE AMERICAN CITY will be two sections on defense housing: Housing to Speed Production, by Dorothy Rosenman, which delineates the housing job that must be done if war production is to be speeded; and War Needs—Housing, which describes war housing in six cities in different parts of the country. Housing from the Tenant's Viewpoint gives results of a two-year study by Elisabeth Coit on tenant reactions to public housing design, with recommendations for improvements.

Emergency Housing and Recreation

Recreation and Housing for Women War Workers—A Summary of Standards, Policies, Procedures.—Women's Bureau, U. S. Department of Labor, Washington, D. C. 1942. 15 pp., mimeo.

An inquiry into the needs for community facilities for women war workers, with specific standards and recommendations for recreation programs; housing and eating facilities; other welfare problems; personnel and other forces responsible for community programs.

Government Records

Microfilm for Public Records.—Research Department, Kansas Legislative Council, Topeka, Kans. 1942. 11 pp., mimeo. 12c.

A consideration of the uses of microfilm for saving space in public buildings—its advantages, disadvantages, and cost, and a description of its use in specific places.

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Every Water Works can afford this inexpensive emergency equipment!

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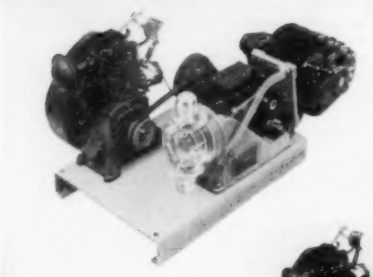

Fig. 1 — Heavy-Duty Dual Drive Chlor-O-Feeder for pressures up to 85 lbs. Approx. $330 delivered at your plant.

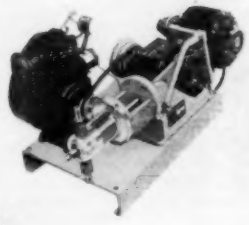

Fig. 2—High Pressure Unit for pressures up to 175 lbs. Approx. $370 delivered at your plant.

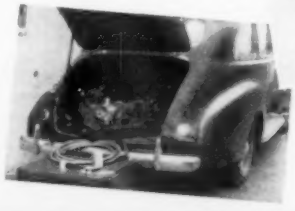

Fig. 3—Portable Emergency Unit fits easily in trunk of car.

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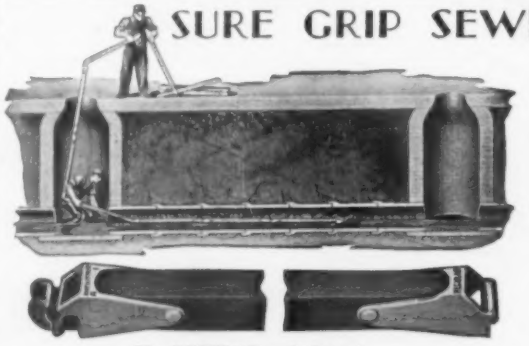

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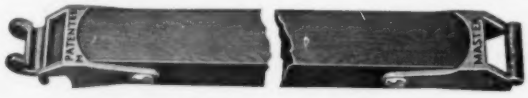

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Emergency Building Ordinances

Emergency Suspension of Municipal Building, Electrical, and Plumbing Ordinances Because of Material Shortages Created by the War Program—Model Ordnance Annotated.—National Institute of Municipal Law Officers, 730 Jackson Place, Washington, D. C. 1942. 6 pp. $2.00.

A discussion of the reasons for suspension of city buildings standards because of shortages created by the war emergency; a model ordinance authorizing such suspension; annotations and reasons for the provisions of the ordinance; and copies of such ordinances adopted by three cities. See also the discussion of this subject on page 99 of the April issue of THE AMERICAN CITY.

Municipal Code

Milwaukee Code of Ordinances.—Compiled and edited by Richard E. Krug, Librarian, Milwaukee Public Library. Apply to Municipal Reference Library, Milwaukee, Wisc. 1941. $5.00.

The Milwaukee Code of Ordinances, is published in loose-leaf form, and divided under eight main headings. From now on, amendments to the code, which can be inserted into this publication, will be published semi-annually. The Building Code of the city is also available from the city library at $1.50.

Assessment Analysis

Assessing in New York State—As an Outstanding Economy and Public Administrative Issue.—Prepared by the Citizens Bureau of Governmental Research, Inc., 180 State St., Albany, N. Y. 1942. 24 pp.

A summary of the Second Report of the Bewley Joint Legislative Committee on Assessing and Reviewing, containing an analysis of assessing practices in the state and recommendations for remedying widespread overassessing and for improving assessing generally.

Other Reports Received

ALLEGHENY COUNTY.—Direct and Work Relief and Federal Work Programs in Allegheny County, 1920-1941. By Ralph Catt Fletcher, Katharine A. Biehl, Joseph L. Zarefsky. Social Research Monograph No. 5, Bureau of Social Research, Federation of Social Agencies of Pittsburgh and Allegheny County, Pittsburgh, Pa. 1942. 53 pp. 75c.

AUBURN, MAINE.—Annual Reports, Trustees, Water and Sewerage Districts, 1941. 25 pp.

BEDFORD COUNTY, TENN. — Tennessee State Planning Commission, Nashville, Tenn. 1941. 108 pp., photo offset.

BELMONT, MAINE.—Annual Report, Municipal Officers, 1941. 18 pp.

BEVERLY HILLS, CALIF.—Annual Report, Fire Chief, 1941. 30 pp., mimeo.

CHARLEMONT, MASS.—Annual Report, 1941. 70 pp.

CHICAGO, ILL.—Proceedings of the Seventh Annual Chicago Recreation Conference, Hotel Sherman, Nov. 18, 1941, under the auspices of the Chicago Recreation Commission, 160 N. LaSalle St., Chicago, Ill. Report mimeographed and distributed by the Lecture Reporting Service, 33 S. Market St., Chicago. 107 pp., mimeo.

CORNING, IOWA.—Annual Report, Municipal Utilities, year ending Mar. 31, 1942.

DETROIT, MICH.—Population Decentralization 1930-40, and Housing 1940 in the Greater Detroit Area. Edited by Stuart E. Walker. Published by the Detroit Bureau of Governmental Research, Inc., 5135 Cass Ave. 1941. 8 pp., photo offset.

EAST LONGMEADOW, MASS.—1941 Annual Reports, 1941. 109 pp.

ERIE, PA.—Annual Report, Department of Accounts and Finance, 1941. 78 pp.

—Budget for 1942—Where the Tax Dollar Goes. 58 pp.

LAUDERDALE, FLA.—City Manager and Audit Report, year ending Aug. 31, 1941. 72 pp.

GADSDEN, ALA.—Report on Examination of Accounts. Apply to George D. King & Co. 1941. 59 pp.

GREENWICH, CONN.—Summary of Annual Report, 1941—War Number. 86 pp.

HENNEPIN COUNTY, MINN.—Financial Statement, 1941. 52 pp.

KINGSTON, MASS.—Annual Report, 1941. 157 pp.

LONGMEADOW, MASS.—Annual Reports, 1941. 160 pp.

MARQUETTE, MICH.—Annual Reports, 1941. 94 pp.

MEMPHIS, TENN.—Fuel for Freedom. The People's Health—Annual Report, Memphis Department of Health, 1941. 32 pp.

MILWAUKEE, WIS.—Foremen's Safety School, 1942. Safety Division, Milwaukee Association of Commerce. 12 pp.

MISSOURI.—Federal Speeds in Missouri. 1941. 39 pp.

NEW JERSEY.—Annual Report, State Housing Authority, 1941. 32 pp.

NEW KENSINGTON, PA.—Eighth Annual Report, Controller, year ending Dec. 31, 1941. 31 pp., mimeo.

PHILADELPHIA, PA.—Annual Report, Art Jury, 1941. 31 pp.

PITTSBURGH, PA.—Motor Vehicle Traffic Accident Analysis, Bureau of Traffic Planning, Department of Public Safety, 1941. 14 pp., mimeo.

RHODE ISLAND.—Traffic Accident Statistics, 1941, State of Rhode Island and Providence Plantations. Executive Department, Registry of Motor Vehicles, 18 pp., mimeo.

SALEM, MASS.—Annual Report, Park Department, 1941. 17 pp.

SALEM, ORE.—Organizing for Civilian Defense: Instruction Manual for Auxiliary Police, prepared by Department of State Police for the Oregon Defense Council; A Manual for Auxiliary Fire Fighters—Fire Prevention and Fire Fighting, prepared by State Field Marshal for the Oregon State Defense Council. 1941. 21 pp., 60 pp., respectively.

ST. LOUIS, MO.—Annual Report, City Plan Commission, year ending Apr. 7, 1941. 44 pp.

SCRANTON, PA.—Chamber of Commerce. Folder with colored photographs, 1942.

SPOKANE, WASH.—Annual Report, City Auditor, 1941. 128 pp.

VIRGINIA. — Information Regarding Sunday Movies in Various Virginia Cities and Towns. 1942. 6 pp., mimeo. 25c.

WASHINGTON, D. C.—National Capital Parks. 14 pp.

WEST READING, PA.—Annual Report, 1941. 46 pp.

WISCONSIN.—Inventory of the Local Government Archives of Wisconsin. Greendale—No. 141, Village Series, Wisconsin Historical Records Survey, Madison. 1941. 101 pp., mimeo.

WYANDOTTE, MICH. — Annual Report, City Clerk, 1941. 66 pp.

YONKERS, N. Y.—Annual Budget, 1942. 54 pp.

Our Public Works Experience.—National Resources Planning Board, Washington, D. C. 1941. 36 pp.

Salvage for Victory Program—A Plan for State and Local Organization. General Salvage Section, Bureau of Industrial Conservation, War Production Board, Washington, D. C. 1942.

Selective Education: 1941 Report of Committee on Public Education and Safety Organization; and Trying Traffic Cases—1941 Report of Committee on Traffic Court Judges and Prosecutors; to the Street and Highway Traffic Section, National Safety Council, Inc., 20 N. Wacker Drive, Chicago, Ill. 15 pp. each.

The Use of City Directories in the Study of Urban Populations; A Methodological Note. Bureau of Research in the Social Sciences, with the Assistance of the Work Projects Administration. University of Texas, Austin, Texas. 1942. 29 pp.

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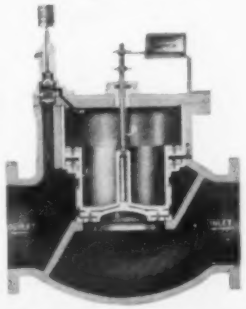

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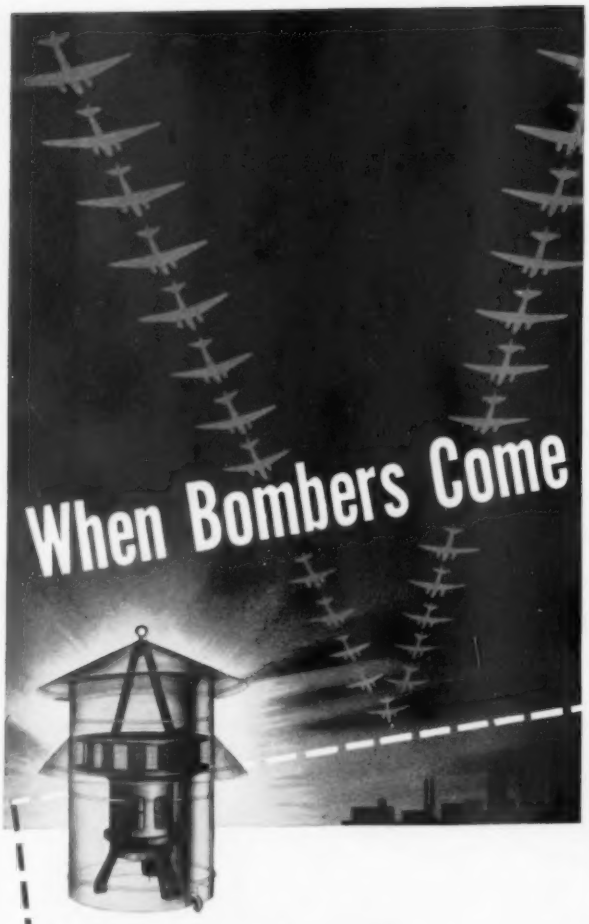

In bomb-blitzed Britain—proud survivor of countless bombings—air raid practices are no longer a matter of *guess work or personal prejudice.* Significant indeed is the fact that in England as in other war stricken areas more ELECTRIC sirens are in use than all other types combined. Follow the path of tested experience. Make certain YOUR air raid warnings are ELECTRIC. Write for Bulletin No. 68 today. Federal Electric Co., Inc., 8744 S. State St., Chicago, U.S.A.

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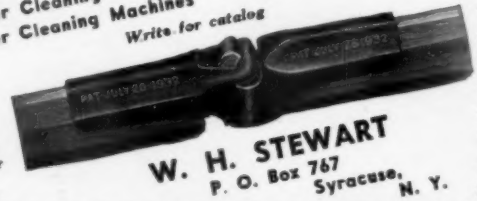

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News and Illustrations

Items of Interest to City, Town and County Officials, and Others Concerned with the Economical Construction and Efficient Operation of Public Improvement Undertakings

How a New Jersey landscape got pushed around

Building a Resort Community with a Baker Bulldozer

Any connection between the monstrous New Jersey mosquito and a piece of earth-moving equipment seems a stretch of the imagination. But the inhabitants of Highland Lakes, a summer resort in the heart of New Jersey's Sussex County, pay tribute to a bulldozer for ridding the district of these pests.

When the resort was contemplated in 1935, there were several serious drawbacks to the project. One was the wide-spread mosquito-infested swampland; another was the absence of decent highways.

To meet these difficulties, a Baker Bulldozer mounted on an Allis-Chalmers Tractor was purchased and put to work on a 40-hour week. Day in and day out, in all kinds of weather, the bulldozer built new roads, rehabilitated old ones, filled in swamps, stripped rocks, pulled stumps, and did all sorts of similar chores.

Twelve miles of highway have been constructed since the bulldozer came to Highland Lakes. To build a road in this section, trees had to be felled, the stumps pulled, and all rock stripped off before grading was done. The bulldozer did each task in turn along with filling in the low, swampy terrain, eliminating the mosquitoes.

And further to show its versatility, the bulldozer rescued snowbound inhabitants in the winter of 1939-40 when a five-foot snowfall blocked the road leading to Vernon, the nearest town. No one could get through until the bulldozer cleared the road the full five miles into Vernon.

The equipment which has done so much for the region is still efficient and still very much on the job. The only repair necessary, after several seasons of operation, has been the replacement of a pressure hose which began to leak. No additional attention other than periodic check-ups and oiling were required.

Asphalt Institute Chooses New Officers

At their annual meeting, the Board of Directors of The Asphalt Institute, 801 Second Ave., New York, N. Y., representing most of the major petroleum asphalt producers of the United States and Canada, reelected Herbert Spencer president of the organization for the ensuing fiscal year. W. R. Macatee was continued as managing director. As chairman of the executive committee, the board named David Waxman of Shell Oil Co.

Other officers elected were: vice-presidents, J. A. Blood, Standard Oil Co. of Calif.; C. H. Dresser, Anderson-Prichard Oil Corp.; and H. B. Pullar, Berry Asphalt Co. George R. Christie, Standard Oil of New York, was elected secretary and treasurer, with John N. Smith of the same company as assistant treasurer.

Byerlyte Corp. of Cleveland, Ohio, joined the Institute, upon unanimous election, bringing to thirty the total of asphalt producers comprising the membership. Asphalt consumption for the year 1941 attained a 22% increase over the previous 1940 high.

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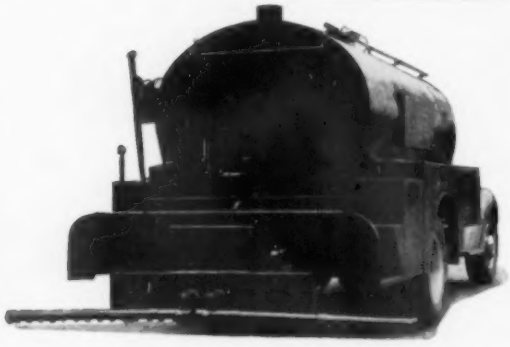

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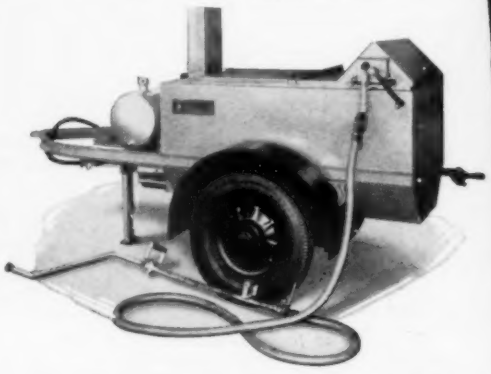
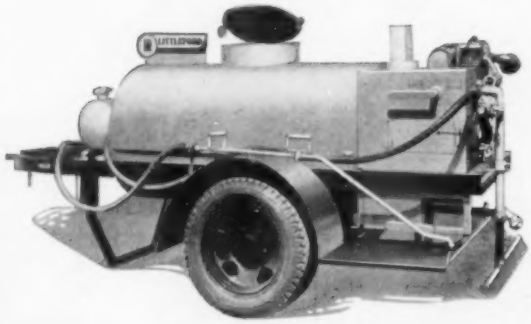
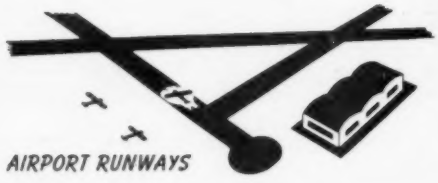




No. 101 Utility Spray Tank



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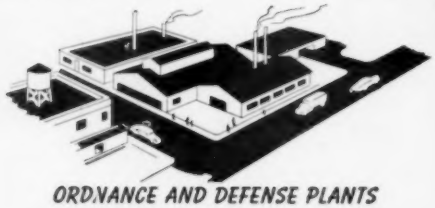
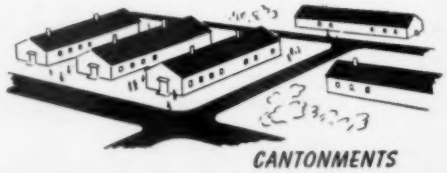


ORDNANCE AND DEFENSE PLANTS



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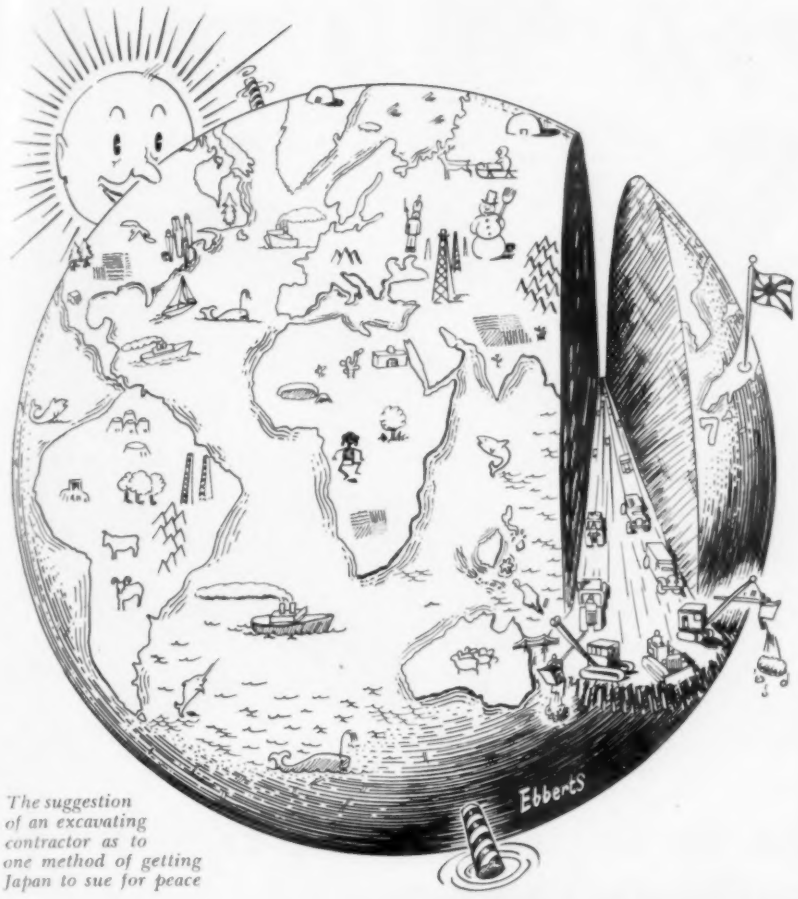

The suggestion of an excavating contractor as to one method of getting Japan to sue for peace

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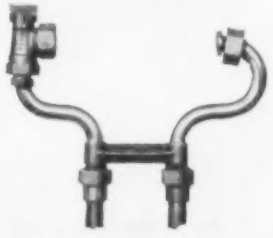

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Electrical Testing Laboratories, Inc., New York City, having acquired the plant and equipment, and having taken over the staff of Electrical Testing Laboratories, offers its wide range of equipment for electrical, chemical, physical, and mechanical tests to government and industry.

Something of the scope of these facilities and the range of operations is illustrated by such diverse subjects of investigation as the testing of incandescent lamps, streetlight glassware, iron pipe fittings; durability of papers; effectiveness of insect destroyers; color-fastness or weather resistance of paints, paper, and fabrics; tests of fuel oil, electricians gloves, all electric devices.

As supplies dwindle, as substitute materials enter into construction, as new sources of materials have to be found, and as inexperience creeps into manufacturing processes, tests and inspections of raw materials and fabricated products become more important. ETL, Inc., invites city officials to send in their problems. Directors comprise: Preston S. Millar, President; F. Malcolm Farmer, Vice-President and Chief Engineer; Denis J. Lees, Vice-President and Treasurer; and George L. Diggles, Leonard J. Lewinson, Norman D. MacDonald, and William F. Little.

Some of this organization's facilities and tests relating to municipal work, particularly testing of incandescent lamps, were outlined on pages 38 and 39 of December, 1940, issue of THE AMERICAN CITY.

DANGER AHEAD...
but
Well Marked Highways Minimize the Danger!
Don't take chances! Play safe! Provide centerlines on all highways, especially at curves. The handy M-B traffic line marker simplifies the job. It stripes centerlines, parking areas, cross walks, safety zones, etc. — one color or two colors — single or double lines. Two models — hand-propelled or self-propelled. If you have a striping problem, write Meili-Blumberg Corp., Box A-5, New Holstein, Wisconsin, for literature on the
M-B MARKER
MEILI-BLUMBERG

A 3539-½

Maintain Ten Times the Mileage with Each Blade, Tire and Truck on CALCIUM CHLORIDE Consolidated Roads

IT IS well known that road surfaces, consolidated with calcium chloride, require only a fraction of the maintenance needed on loose unbound surfaces. Maintenance figures from many leading counties and states definitely show that one maintenance blader can serve ten times as many miles if roads are consolidated with calcium chloride. This is doubly important now that cutting edges are so scarce.

Reliable statistics show, also, that surface consolidation saves up to 300 cubic yards of aggregate, annually wasted on unbound roads. This means not only a financial saving in aggregate replacement, but a further substantial saving of tools and shovels, as well as trucks, tires and manpower.

To make good secondary roads out of poor ones and to improve roads steadily with meager maintenance budgets, consolidate all unpaved surfaces.

New literature tells how and when to add coarse or fine aggregate, or binder soils, so that when moisture bound with calcium chloride your roads last longer and serve better with much less wear on maintenance equipment and funds. Write for new literature today.

CALCIUM CHLORIDE ASSOCIATION, 4145 Penobscot Bldg., Detroit, Michigan

CALCIUM CHLORIDE
for SURFACE CONSOLIDATION

CALCIUM CHLORIDE ASSOCIATION
4145 Penobscot Bldg., Detroit, Mich.
Please send me new Road Surface Consolidation Book.

Name _____

Address _____

City _____ State _____

Truck Maintenance for the Duration

In an effort to assist in the maintenance of trucks "for the duration," the Dodge Division of the Chrysler Corp. has listed a series of points that they feel are essential. These factors are as follows:

The driver—carelessness on the part of the driver under existing conditions is harmful to the point that it may be considered as bordering on sabotage. Too much emphasis cannot be placed on the careful selection, training, and checking of truck drivers.

Lubrication—Proper and regular lubrication will do more to prolong the life of a motor truck than any other operation.

Strict Inspection—The battery, generator, and the spark plugs are among the points that need careful inspection. Insulation of all wiring should be watched to see that current is delivered in full volume to the places where it is needed.

Fuel Service—Fuel tanks as well as fuel lines should be kept free of water and foreign matter. Fuel filters should be cleaned regularly. The manifold heat control also should be checked to be sure that it is functioning.

Valves—If engine power appears to be reduced, the use of the compression gauge may show that the valves are not seated right or that piston rings are worn. Low compression indicates that the engine should be opened and repaired.

Tires—Inflation pressure should be checked at least once a week and under current conditions once a day. All tires, including spares, should be rotated regularly. When dual tires are used they should be of uniform size.

With proper care, it is pointed out, the modern motor truck is capable of standing up in hard service for many years. Neglect, however, breeds trouble and expense.

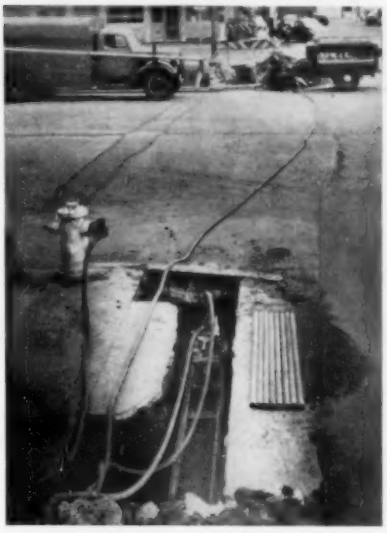
Air Raid Protection for Centrifugal Pumps

If water mains are broken during air raids and water does not reach the pumps, they will "run dry" and serious damage may result.

B/W Floatless Controls, made by B/W Controller Corp., 2200 E. Maple Road, Birmingham, Mich., provide protection against this. An electrode installed in the water main is wired to the B/W relay, and as long as water is in contact with this electrode the load contacts of the relay are closed. The said load contacts of the relay are wired in series with the pilot circuit of the motor starter and as long as water is in contact with the electrode the pump will operate.

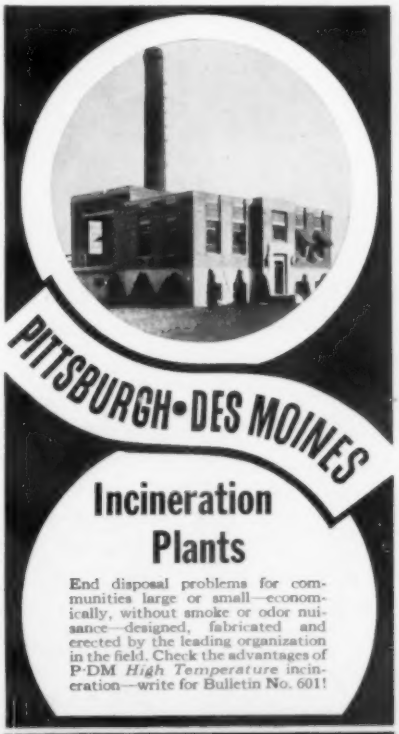
When water leaves the electrode in the main, due to a break or leak, the relay opens, opening the load contacts and breaking the pilot circuit of the motor starter which stops the pump. The pump will remain inoperative until water is again in contact with the electrode. At this point the cycle is repeated.

Installing a Service without Trenching



A view of a Schramm No. 105 De Luxe Compressor operating a heavy-duty model Hydrauger on a pipe installation in Petaluma, Calif.

The Hydrauger system of pipe installation is pointed out as a distinct improvement over the older pipe-jacking method. Bores have been run accurately for as great as 120 feet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Incineration Plants
End disposal problems for communities large or small—economically, without smoke or odor nuisance—designed, fabricated and erected by the leading organization in the field. Check the advantages of P-DM *High Temperature* incineration—write for Bulletin No. 601!
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ARE YOU PREPARED FOR WAR'S INCREASED FIRE HAZARDS?

M H

VALVES HYDRANTS *and* PIPE LINE ACCESSORIES

A.W.W.A. HYDRANTS

Underwriters Approved

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

M & H Fire Hydrants are dry top and revolving head. They are easy to lubricate. Maintenance costs are low, due to simplicity of design and rugged construction. They have low friction loss and great efficiency because barrel diameter is not reduced and there are no working parts or obstruction in waterway. Special Traffic model is designed to yield at the ground line under impact. Repair is simple and easy by renewing breakable bolts and breakable coupling on stem.

M & H VALVE AND FITTINGS COMPANY
ANNISTON, ALABAMA

A major war asset is the millions of square yards of strong, dependable concrete pavement now in service on the nation's airports.

U. S. Army Air Corps photo

CONCRETE meets these runway "musts"

—at lowest cost

Concrete is playing a vital part in major airport construction today because it has no equal for safe, economical, uninterrupted service. As proof, look at Floyd Bennett, first concrete built in 1929... Grand Central, 1928... Lunken Field, 1932...Wayne County, 1929... Indianapolis, 1930... Barksdale Field, 1934.

These and other early concrete surfaces have carried heavier and heavier traffic with negligible maintenance and repairs.

CONCRETE AIDS ACCURATE DESIGN
Proved formulas assure safe, accurate concrete pavement designs for wheel loads up to 120,000 pounds and more.

SPEED ON THE JOB
500,000 square yards of concrete airport pavement can be completed in 30 paving days. There's minimum weather delay.

LESS MATERIAL TRANSPORTATION
Concrete provides strength for heavy duty with smallest quantities of materials, hence with minimum burden on transportation.

LOWEST FIRST COST AND MAINTENANCE
Heavy duty concrete runways cost less to build than other surfaces of equal load capacity. Their low upkeep conserves wartime labor and materials, reduces the final cost.

The assistance of our technical staff is available to designers and builders of airports and other war construction.

PORTLAND CEMENT ASSOCIATION
Dept. 5-4, 33 W. Grand Ave., Chicago, Ill.

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

BUY DEFENSE STAMPS AND BONDS . . . SUPPORT THE RED CROSS

Mention THE AMERICAN CITY—it helps.

A view of the M-B Automatic Highway Marker marking traffic lanes at the rate of from 3 to 6 miles per hour

Traffic-Lane Marker Has Many Other Uses

In developing equipment for the quick and efficient marking of traffic lanes, cross walks, or other areas where a visible line will expedite handling of traffic, the Meili-Blumberg Corp., Box A-5, New Holstein, Wis., has developed a simplified marker.

This equipment may be obtained either in a hand-propelled or self-propelled type and will mark not only single and double lines, but also dashed lines, if required.

This unit, Meili-Blumberg officials point out, is not a single purpose machine. Municipal officials will find it useful for marking playgrounds, parking stations, airports, football fields, baseball diamonds, as well as various other places.

"Production for Victory"

The "Production for Victory" edition of U. S. Steel News, for April, disclosed an unprecedented number of production records attained by subsidiaries of United States Steel Corp. One subsidiary was cited as having established 157 new production records in 1941. These included new high marks by 22 of its 57 blast furnaces, by 16 of its 25 steel producing departments, by 46 out of 92 primary and finishing mills, as well as 73 all-time records in plants producing molds, wheels, axles, armor forgings, and castings.

B. F. Fairless, U. S. Steel President, in a foreword addressed to employees, said: "Those of us who are identified with U. S. Steel and its subsidiaries have reason to be proud of the great productive power at our command. Our seasoned and efficient organization of more than 320,000 employees is an industrial army of incalculable value to our country—an army, moreover, which has long since enlisted for the duration. United States Steel will produce as never before—not only this spring and summer, but every day thereafter until victory is won."

Sections of the victory number of U. S. Steel News are devoted to the wartime problems of safe-guarding production and first aid training. Portraying the active part taken by employees in production for victory, the magazine also contains articles describing the voluntary leisure-time activity of the Corporation's employees.

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For Better Uniforms Demand These Labels!

REEVES ARMY TWILL SCORES A HIT!

Men who safeguard our City require uniforms whose official appearance inspires public confidence. They must also withstand the strain of active duty. That's why Reeves Army Twill wins their praise. Specify this famous fabric in *your* uniforms.

Reeves Army Twill passes U. S. Govt. tests for strength, endurance and color-fastness. For fabric vitality it's a leader!

For matching shirts, GLENGARRIE POPLIN is equally popular. Both fabrics available in favorite colors—are Sanforized* against shrinking.

* Fabric shrinkage not more than 1%. (U. S. Government Test CCC-T-191-a).

See your nearest dealer for uniforms, sport and work clothes made from these famous fabrics, or write for leaflet to:

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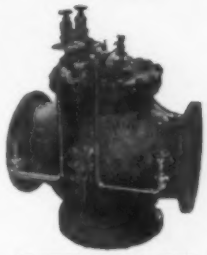


ALTITUDE VALVES for

Control of elevation and heads into and out of tanks, basins and reservoirs.

1. Single acting.
2. Double acting.
3. Combination assembly for three or more automatic operations.

REDUCING VALVES for

Maintaining desired discharge pressure regardless of change in rate of flow.

1. Pressure reduction only.
2. Pressure reducing and reverse flow.
3. Combination assemblies —for control of pressure at inlet and outlet of valve.

SURGE-RELIEF VALVE for

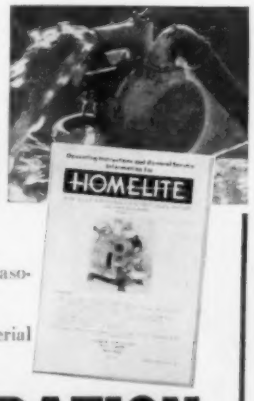
Maintaining safe operating pressures for conduits, distribution and pump discharge.

Ross Valve Mfg. Co.
INCORPORATED
P. O. Box 596 Troy, N. Y.

HOMELITE Self-Priming Pumps Handle Seepage Automatically

A Homelite Portable Pump has a capacity of 15,000 gallons per hour—but that doesn't mean it's too proud to handle the small stuff. Far from it. A Homelite is just as efficient with seepage, no matter how small, as it is with large volumes. Being completely self-priming, it keeps seepage always at strainer level. It prevents water from accumulating. Insures drier and better footings for your men.

Easily portable, only 91 pounds complete with its built-in engine, a Homelite is the ideal pump for hard general duty. It has a 28 foot suction lift. It is non-clogging. And it's built for rugged service.



A Little Care Means Extra Wear

Homelite users can get better and longer service out of their pumps with just a little care.

1. Keep the suction hose tight and leak proof.
2. Always use a strainer on the suction hose.
3. Always mix ¾ pint of No. 40 oil with each gallon of gasoline used.
4. Keep breaker points set at .020 inches.

Send for our helpful service manual. Specify model and serial number of the Homelite Pumps you are now using.

HOMELITE CORPORATION

205 RIVERDALE AVE., PORT CHESTER., N. Y.

B. W. Clark Named Westinghouse Sales Head

B. W. Clark, vice-president in charge of the Westinghouse Electric and Manufacturing Co.'s merchandising division, was appointed vice-president in charge of sales of the company. He succeeds Ralph Kelly, who resigned to become executive vice-president of the Baldwin Locomotive Works.

B. W. Clark

George H. Bucher, president of Westinghouse, announced that Mr. Clark, in addition to supervising the sale of apparatus, will be responsible for coordinating all sales of the Westinghouse Co. and its subsidiaries. He will transfer his headquarters from Mansfield, Ohio, to Pittsburgh, Pa.

Mr. Clark, who is also president of the Westinghouse Electric Supply Co., was born in Gagetown, New Brunswick, Canada. He spent his early years in Adrian, Mich., and attended the University of Michigan. In 1925 Mr. Clark became a special representative of the Westinghouse Electric Supply Co., and four years later he was made general manager. In 1932 he was made vice-president and director, and five years later was elected president of the Supply Company.

Mr. Clark was elected vice-president of the Westinghouse Electric and Manufacturing Co. in January, 1941, heading its merchandising activities.

Peerless Pump Acquires Sterling Pump Corp.

Completing another phase of progressive plant expansion, Peerless Pump Division of the Food Machinery Corp., 335 West Ave., 26, Los Angeles, Calif., and Canton, Ohio, announces the acquisition of the Sterling Pump Corp., Hamilton, Ohio, and Stockton, Calif.

Peerless will consolidate the Sterling plant at Hamilton with the new Peerless manufacturing plant at Canton, Ohio. Sterling's Stockton plant will be merged with the Jean Bean Mfg. Co., Division of the Food Machy. Corp., San Jose, Calif.

According to Vernon Edler, Vice-President and General Manager of the Peerless Pump Division, consolidation of the two manufacturing plants will greatly expedite handling of a tremendously expanded volume of pumps on order at both concerns.

In connection with Sterling's purchase by Peerless, it was indicated by Mr. Edler that an unusual development in pump design will soon be made available to the pump market. This development will be announced in the very near future.

Ray C. Sparling Appointed Pacific Coast Jobber for Sparling Main-Line Meters

Ray C. Sparling has recently established himself as the Pacific Coast distributor for Sparling water measuring equipment. Mr. Sparling has been sales representative for R. W. Sparling, 945-51 No. Main St., Los Angeles, Calif., ever since his graduation from college in 1933. Since the first of the year he has been handling the Sparling Main-Line Water Meters in the states of Oregon, Washington, California, and Arizona as an independent sales agent.

Clay Sewer Pipe Assn. Publishes New Handbook

A new handbook published on the uses of clay sewer pipe has recently been issued by the Clay Sewer Pipe Association, Inc., 947 Oliver Bldg., Pittsburgh, Pa., to include all items stocked by manufacturers and the conforming dimensions of such material. This publication is available free to all interested engineers and city officials.

This booklet replaces the previous publication of Standards put out in 1928. All items described in the handbook, it points out, are normally carried in manufacturers' stocks and exceed the requirements of A.E.T.M. specifications.

City Clings to Wooden Walks

One of the few cities in America to cling to plank walks in an age of steel and concrete, Brookline, Mass., has cherished her wooden walks since the first were laid back in 1870. At the turn of the century, thrifty New England fathers started a gradual replacement of the wooden walks with cement and asphalt. However, there arose such a clamor from residents who wanted to retain the rustic beauty of their old walks, that the change was never completed.

City officials were helped in the solution of their problem of keeping down maintenance costs by the perfection of modern methods of wood preserving. Planking, with its life trebled by the protection of dry-salts preservative, provided the city with sidewalks guarded against termites and decay while at the same time it retained all the original beauty.

In 1930, the city first began to use pressure-treated lumber in replacing decayed planking. Today, the use of pressure-treated lumber for these sidewalks has cut the annual maintenance by approximately 54 per cent.

"We are sure of the safety of treated lumber," Henry Smith, assistant town engineer, stated recently. "In the past it was common to get telephone calls from residents who had stepped through a decayed plank and were home nursing barked shins or twisted ankles."

Daniel G. Lacey, left, superintendent of the city's highway department, and his assistant, Henry Smith, examine a section of walk constructed of treated lumber

The "Flow Line" Makes Its Debut

The first issue of a new magazine, *The Flow Line*, devoted to measurement and control in the gas, oil, and process industries, has just been published by the Merco Nordstrom Valve Co. and the Pittsburgh Equitable Meter Co., 400 Lexington Ave., Pittsburgh, Pa.

This issue contains a statement by Col. W. F. Rockwell, President of Pittsburgh Equitable Meter Co., covering the work this firm is performing in the war effort and in regard to civilian service.

The magazine is available to those interested by writing R. S. Reed, Jr., Editor.

WHY—

The above illustration shows the position of the rubber lining in

Bi-Lateral Fire Hose

when it is held in a flattened position between calls into service. This is why we can save a city one replacement, because the hose will give double the service of any hose constructed under the old method.

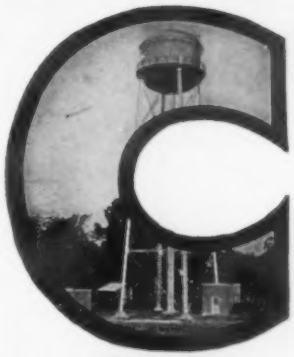
— Also —

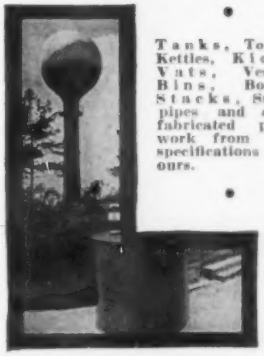
We can load 25% more on the apparatus-bed, actually making an $8,000 truck loaded with the Bi-Lateral construction, cheaper than one priced at $7,000 when loaded with other construction.

BI-LATERAL FIRE HOSE CO.

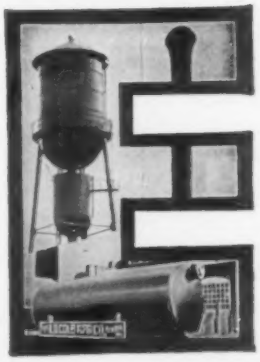
20 N. Wacker Drive, Chicago, Illinois

Tank Builders For Over 80 Years!





Tanks, Towers, Kettles, Kiers, Vats, Vessels, Bins, Boilers, Stacks, Standpipes and other fabricated plate-work from your specifications or ours.



Write for "Tank Talk"—6-A, or let us figure on your requirements.

R.D.COLE MFG.CO.

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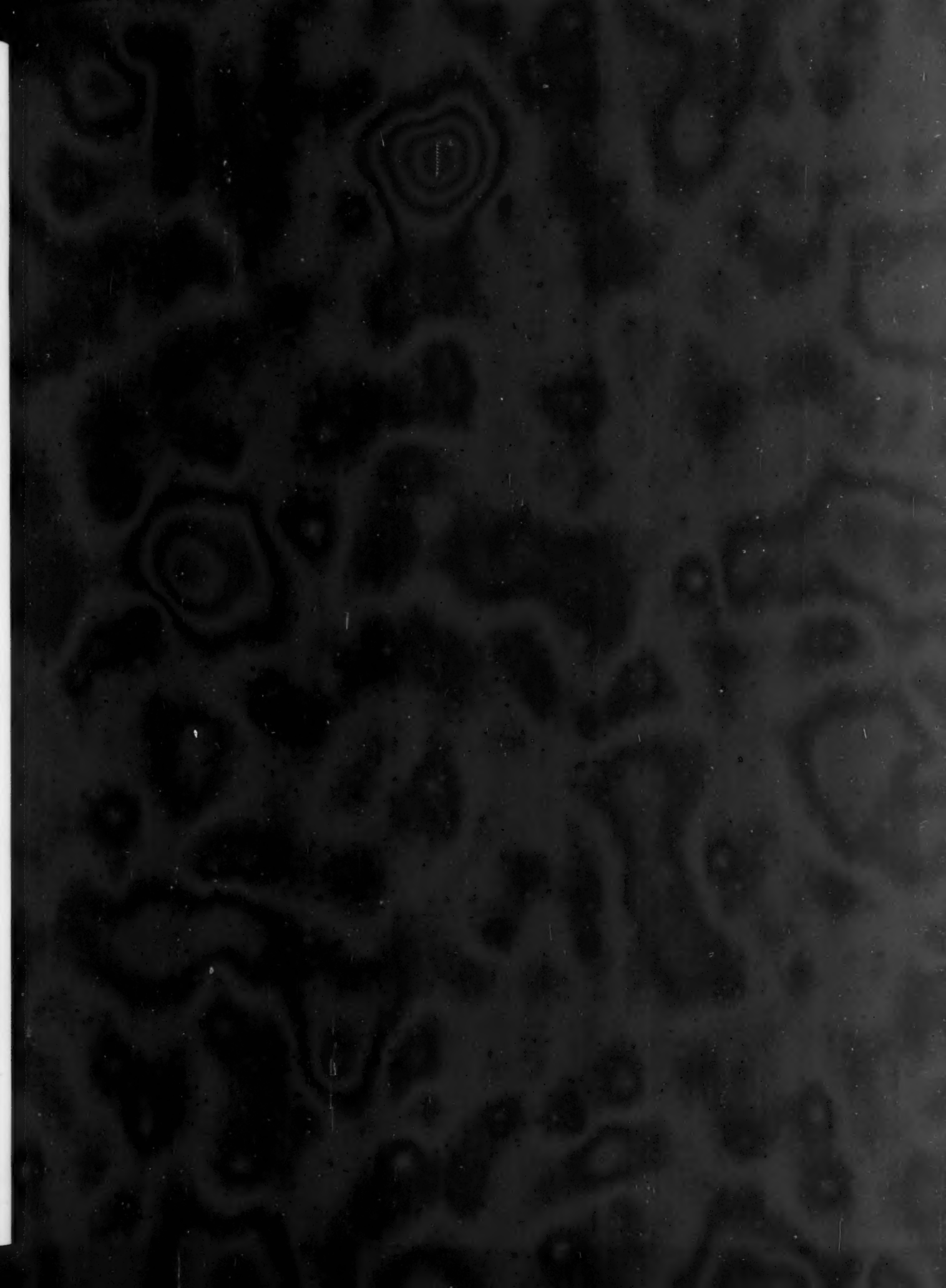

JUNE, 1942

The American City

PERIODICAL ROOM
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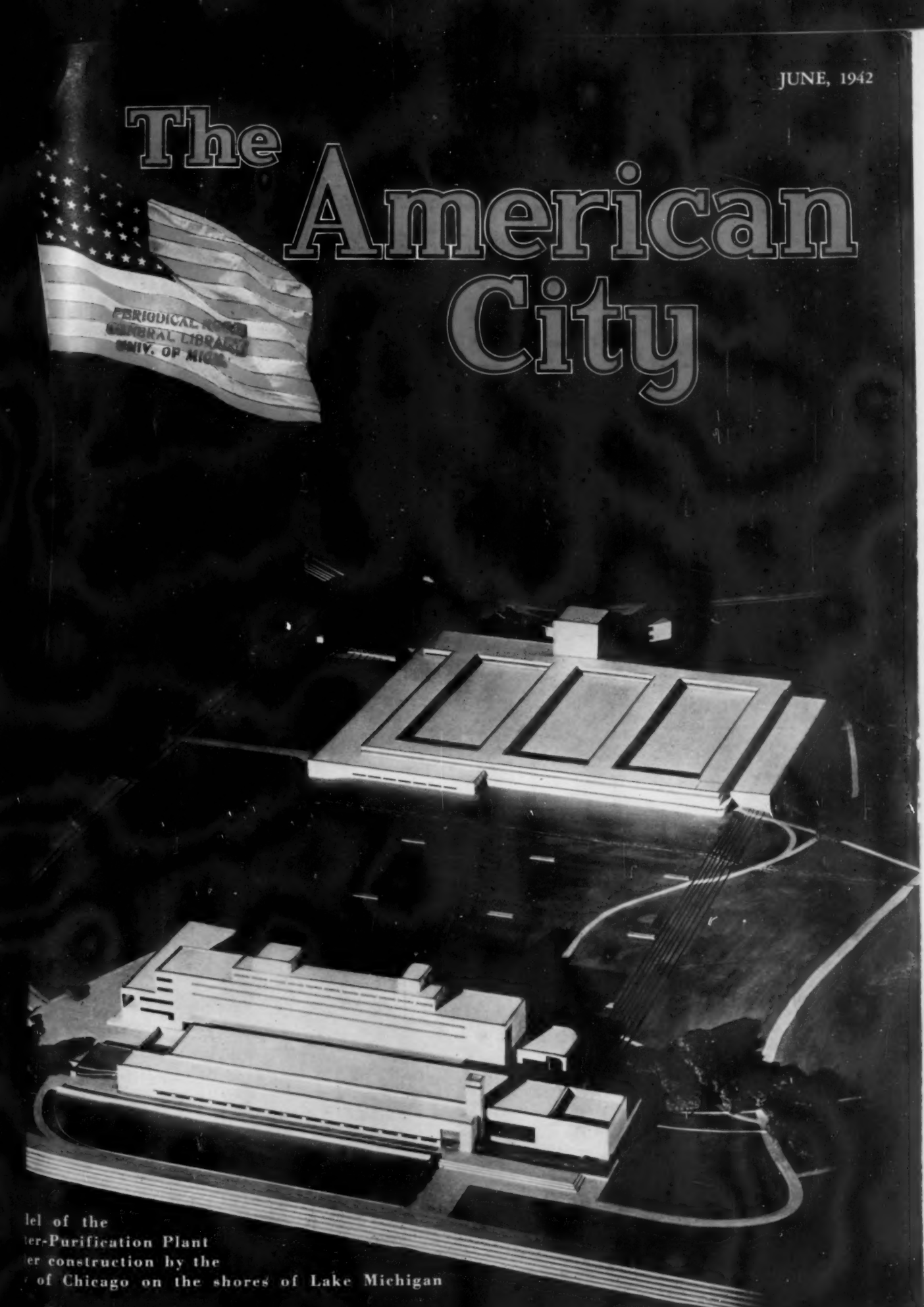
UNIV. OF MICH.



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ter-Purification Plant
er construction by the
of Chicago on the shores of Lake Michigan